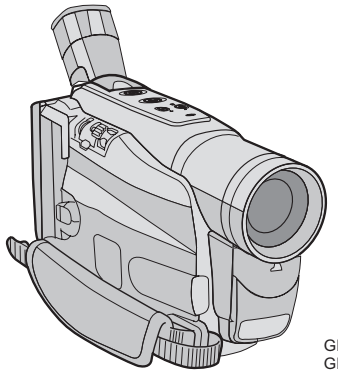
JVC

SERVICE MANUAL

COMPACT VHS CAMCORDER

GR-AXM18US, GR-SXM38US



GR-AXM18USM[M6A622],
GR-SXM38USM[M6C623]

S-VHS C
Super VHS
Super VHS ET

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700 (MECHANISM ASSEMBLY).
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

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No.YF126
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SPECIFICATION

General	Format		VHS NTSC standard (GR-AXM18US) S-VHS/VHS NTSC standard (GR-SXM38US)
	Power source		DC 11 V (Using AC Adapter)
			DC 6 V (Using battery pack)
	Power consumption	Viewfinder on	3.5 W
		LCD monitor on	4.3 W
		LED light*	0.4 W * GR-SXM38US only.
		Maximum	9.2 W (When charging a battery)
	Signal system		NTSC-type
	Video recording system	Luminance	FM recording
		Colour	Converted sub-carrier direct recording Conforms to VHS standard
	Cassette		VHS cassette (GR-AXM18US), S-VHS / VHS cassette (GR-SXM38US)
	Tape speed	SP	33.35 mm/sec. (1-5/16 ips)
		EP	11.12 mm/sec. (7/16 ips)
	Recording time (max.)	SP	40 minutes
		EP	120 minutes (with TC-40 cassette)
	Operating temperature		0°C to 40°C (32°F to 104°F)
	Operating humidity		35% to 80%
	Storage temperature		-20°C to 50°C (-4°F to 122°F)
	Weight		Approx. 770 g (1.7 lbs.) (GR-AXM18US), 774 g (1.71 lbs.) (GR-SXM38US)
	Dimensions (W × H × D)		81 mm × 125 mm × 216 mm(3-1/4" × 4-15/16" × 8-9/16") (with the LCD monitor closed and with the viewfinder fully tilted downward)
	Pickup		1/6" format CCD
	Lens		F1.8 f = 2.2 mm to 44 mm, 20:1 power zoom lens with auto iris and macro control (GR-AXM18US) / F1.8 f = 2.2 mm to 55 mm, 25:1 power zoom lens with auto iris and macro control (GR-SXM38US)
	Filter diameter		Ø 30.5 mm
	Viewfinder		Electronic viewfinder with 0.16" black/white LCD
	White balance adjustment		Auto/Manual adjustment
	LCD monitor		2.50" diagonally measured LCD panel/TFT active matrix system
	Speaker		Monaural
Connectors	Video		1 V (p-p), 75 Ω unbalanced, analog output (via Video output connector)
	Audio		300 mV (rms), 1 kΩ, analog output (via Audio output connector)
	S-Video (GR-SXM38US)		Y : 1 V (p-p), 75 Ω, analog output C : 0.29 V (p-p), 75 Ω, analog output

■AC Adapter

Power requirement	U.S.A and Canada	AC 120 V to 60 V~
	Other countries	AC 110 V to 240 V~, 50 Hz/60 Hz
Output		DC 11 V, 1 A

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

SECTION 1
PRECAUTION

1.1 SAFTY PRECAUTIONS

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold.However,in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

1.1.1 Precautions during Servicing

(1) Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product.When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

(2) Parts identified by the ⚠symbol and shaded ( ) parts are critical for safety.
Replace only with specified part numbers.

NOTE :
Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

(3) Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

(4) Use specified internal wiring. Note especially:
- Wires covered with PVC tubing
- Double insulated wires
- High voltage leads

(5) Use specified insulating materials for hazardous live parts. Note especially:
- Insulation Tape
- PVC tubing
- Spacers
- Insulation sheets for transistors
- Barrier

(6) When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

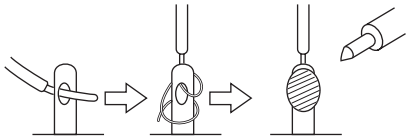


Fig.1-1-1

(7) Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

(8) Check that replaced wires do not contact sharp edged or pointed parts.

(9) When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

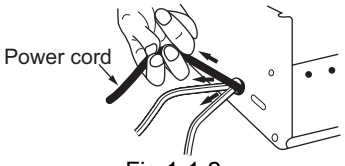


Fig.1-1-2

(10) Also check areas surrounding repaired locations.

(11) Products using cathode ray tubes (CRTs)In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits.Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

(12) Crimp type wire connectorIn such cases as when replacing the power transformer in sets where the connections between the power cord and power trans former primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

- **Connector part number** :E03830-001
- **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
- **Replacement procedure**

a) Remove the old connector by cutting the wires at a point close to the connector.Important : Do not reuse a connector (discard it).

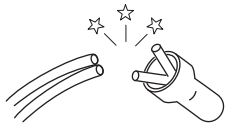


Fig.1-1-3

b) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

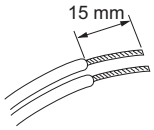


Fig.1-1-4

c) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

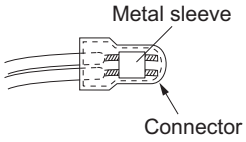


Fig.1-1-5

d) As shown in Fig.1-1-6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

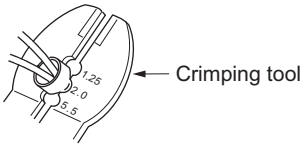


Fig.1-1-6

e) Check the four points noted in Fig.1-1-7.

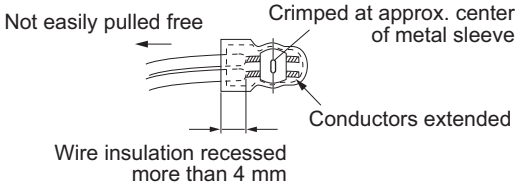

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.1-1-7

1.1.2 Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

(1) Insulation resistance test
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).See table 1 below.

(2) Dielectric strength test
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See Fig.1-1-11 below.

(3) Clearance distance
When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See Fig.1-1-11 below.

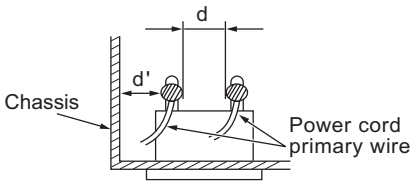


Fig.1-1-8

(4) Leakage current test
Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
Measuring Method : (Power ON)Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig.1-1-9 and following Fig.1-1-12.

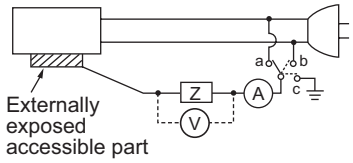
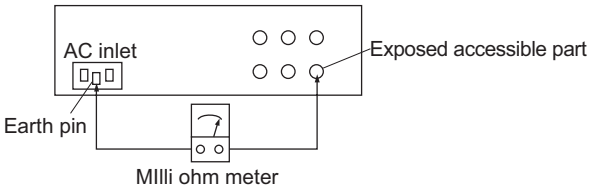


Fig.1-1-9

(5) Grounding (Class 1 model only)
Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).Measuring Method:
Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See Fig.1-1-10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

Fig.1-1-10

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦R≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Fig.1-1-11

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Fig.1-1-12

NOTE :
These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 DIFFERENCE LIST

The following table indicate main different points between models GR-AXM18US and GR-SXM38US.

MODEL	GR-AXM18US	GR-SXM38US
TAPE FORMAT	VHS-C	S-VHS-C
VIDEO(LED) LIGHT	NO	YES
S-VHS ON/OFF	NO	YES
S OUTPUT	NO	YES
A / V CABLE	YES	NO
CASSETTE ADAPTER	NO(OPTIONAL)	YES(PROVIDED) C-P8U

SECTION 3
DISASSEMBLY

3.1 BEFORE ASSEMBLY AND DISASSEMBLY

3.1.1 Precautions

- Be sure to disconnect the power supply unit prior to mounting and soldering of parts.
- Prior to removing a component part that needs to disconnect its connector(s) and its screw(s), first disconnect the wire(s) from the connector(s), and then remove the screw(s).
- When connecting/disconnecting wires, pay enough attention not to damage the connectors.
- When inserting the flat wire to the connector, pay attention to the direction of the flat wire.
- Be careful in removing the parts to which some spacer or shield is attached for reinforcement or insulation.
- When replacing chip parts (especially IC parts), first remove the solder completely to prevent peeling of the pattern.
- Tighten screws properly during the procedures. Unless specified otherwise, tighten screws at a torque of 0.196N·m (2.0kgf·cm). However, 0.196N·m (2.0kgf·cm) is a value at the time of production. At the time of service, perform the procedure at a torque 10% less than 0.196N·m (2.0kgf·cm). (See "SERVICE NOTE" as for tightening torque.)

3.1.2 Destination of connectors

Two kinds of double-arrows in connection tables respectively show kinds of connector/wires.

⇔ : Flat wire ↔ : Wire ⬌ : Board to board (B-B)
: The connector of the side to remove

CONN. No.	CONNECTOR					PIN No.
CN2a	MAIN	CN101	⇔	MONI/BW	CN761	40
CN2b	MAIN	CN103	↔	MIC	CN762	2

3.1.3 Disconnection of connectors (Wires)

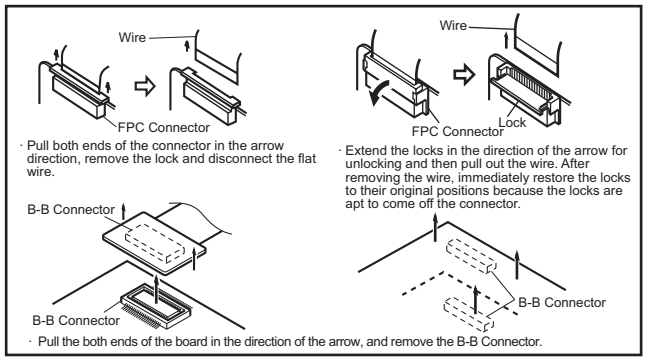

Wire
FPC Connector
· Pull both ends of the connector in the arrow direction, remove the lock and disconnect the flat wire.
Wire
FPC Connector
Lock
· Extend the locks in the direction of the arrow for unlocking and then pull out the wire. After removing the wire, immediately restore the locks to their original positions because the locks are apt to come off the connector.
B-B Connector
B-B Connector
B-B Connector
· Pull the both ends of the board in the direction of the arrow, and remove the B-B Connector.

Fig.3-1-1

3.1.4 Tools required for disassembly and assembly

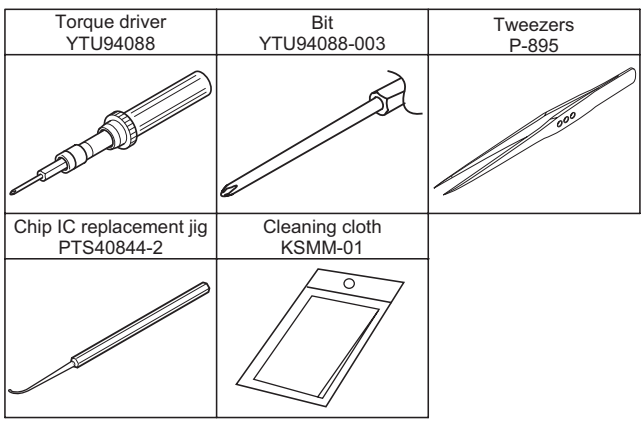


Fig.3-1-2

- **Torque driver**
  Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.
- **Bit**
  This bit is slightly longer than those set in conventional torque drivers.
- **Tweezers**
  To be used for removing and installing parts and wires.
- **Chip IC replacement jig**
  To be used for replacement of IC.
- **Cleaning cloth**
  Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

3.2 ASSEMBLY AND DISASSEMBLY OF MAIN PARTS

3.2.1 Assembly and disassembly

When reassembling, perform the step(s) in reverse order.

STEP No.	PART	Fig. No.	POINT	NOTE
[1]	TOP COVER ASSY	Fig.C1	S1,2(L1)	-
[2]	UPPER ASSY (Inc. VF ASSY, SPEAKER/MONITOR)	Fig.C2-1	S2a,2(S2b),3(S2c) 2(S2d),S2e,S2c L2,CN2a,b	-
[8]	VF ASSY	Fig.C2-2	2(S8),L8,CN8a	NOTE 8a NOTE 8b
(∗1)	(∗2)	(∗3)	(∗4)	(∗5)

(∗1) Order of steps in Procedure
When reassembling, preform the step(s) in the reverseorder. These numbers are also used as the identification (location) No. of parts Figures.
(∗2) Part to be removed or installed.
(∗3) Fig. No. showing Procedure or Part Location.
C = CABINET
(∗4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
S = Screw
L = Lock, Release, Hook
SD = Solder
CN = Connector

[Example]

- 4 (S1a) = Remove 4 S1a screws.
- 3 (L1a) = Disengage 3 L1a hooks.
- 2 (SD1a) = Unsolder 2 SD1a points.
- CN1a = Remove a CN1a connector.

(∗5) Adjustment information for installation.

3.2.2 ASSEMBLY/DISASSEMBLY OF CABINET PARTS AND ELECTRICAL PARTS

●Disassembly procedure

STEP No.	PART NAME	Fig. No.	POINT	NOTE
[1]	CASE COVER(M) ASSY	FA1	S1,2(L1)	-
[2]	LOWER CASE ASSY	FA2	6(S2),CN2a,CN2b	-
[3]	TOP COVER ASSY (Inc.TOP BOARD ASSY,VF ASSY)		S3a,S3b,CN3a,CN3b	-
[4]	TOP BOARD ASSY		2(S4)	-
[5]	VF ASSY		3(S5)	NOTE5
[6]	UPPER CASE(M) ASSY (Inc.COVER(UPPER/M) ASSY, MONITOR ASSY)	FA3	6(S6a),S6b,L6,CN6	NOTE6
[7]	COVER(UPPER/M) ASSY	FA4	2(S7a),S7b	-
[8]	MONITOR ASSY		S8a,L8a,L8b,SHEET(FPC),2(S8b)	NOTE8a,b,c,d
[9]	FRONT COVER ASSY Inc. DC LIGHT,MIC	FA5	CN9a,CN9b,S9,L9a,L9b	NOTE9a,b
[10]	FRONT BOARD ASSY		S10	NOTE10
[11]	MIC		S11	-
[12]	FRONT FRAME SA		2(S12)	NOTE12
[13]	MAIN BOARD ASSY	FA6	CN13a, b, c, d, e, f, g, h, 2(S13), CN13j,L13	-
[14]	OP FRAME ASSY	FA7	2(S14a), S14b	-
[15]	BRACKET OP ASSY		S15	-
[16]	OP BLOCK ASSY		-	NOTE16
[17]	SIELD CASE(MAIN)	FA8	S17a,S17b	NOTE17
[18]	MECHANISM ASSY		2(S18a),S18b	-
[19]	REAR BOARD ASSY	FA9	S19	-
[20]	FRAME ASSY		-	-

NOTE 5 :
For disassembly of the [5] VF ASSEMBLY, refer to 3.2.3 ASSEMBLY/DISASSEMBLY OF [5] VF ASSEMBLY .

NOTE 6 :
Take care not to break or damage the FRAME.

NOTE 8a :
Take care not to cut the FPC wire.

NOTE 8b :
Insert and attach the SHEET(FPC) between the MONITOR FPC and the UPPER CASE(M)ASSEMBLY.

NOTE 8c :
Attachment of the FPC.

NOTE 8d :
For disassembly of the [8] MONITOR ASSEMBLY, refer to 3.2.4 ASSEMBLY/DISASSEMBLY OF [8] MONITOR ASSEMBLY.

NOTE 9a :
Take care not to damage the OP BLOCK ASSEMBLY when and after the FRONT CASE ASSEMBLY is removed.

NOTE 9b :
Attachment of the WIRE.

NOTE 10 :
There are models that do not have FRONT BOARD ASSY.

NOTE 12 :
Screwing sequence should be in order here first and others.

NOTE 16 :
For disassembly of the CCD BOARD ASSEMBLY, refer to 3.2.5 ASSEMBLY AND DISASSEMBLY OF [16] OP BLOCK ASSEMBLY AND CCD BOARD ASSEMBLY .

NOTE 17 :
When attaching the MECHANISM ASSEMBLY to S.CASE (MAIN), pull out the FPC CABLE not to be inserted between the MECHANISM ASSEMBLY and S.CASE (MAIN).

●Destination of connectors

CN.NO.	CONNECTOR					PIN NO.
CN2a	MAIN	CN27	↔	SPEAKER	-	2
CN2b	MAIN	CN13	⇔	ZOOM UNIT	-	14
CN3a	MAIN	CN7301	⇔	B/W VF ASSY	CN7401	14
CN3b	MAIN	CN18	⇔	TOP	CN401	6
CN6	MAIN	CN16	⇔	MONITOR BL	CN7601	25
CN9a	MAIN	CN6	↔	LAMP(DC LIGHT)	-	3
CN9b	MAIN	CN8	↔	MIC	-	2
CN13a	MAIN	CN3	⇔	CAPSTAN MOTOR	-	18
CN13b	MAIN	CN7	⇔	A/C HEAD	-	11
CN13c	MAIN	CN22	⇔	CCD	CN5301	14
CN13d	MAIN	CN15	⇔	OP BLOCK ASSY	-	24
CN13e	MAIN	CN4	↔	LOADING MOTOR	-	2
CN13f	MAIN	CN1	⇔	DRUM_MOTOR	-	10
CN13g	MAIN	CN5	⇔	HEAD(VIDEO,FLY.E)	-	11
CN13h	MAIN	CN2	⇔	SENSOR	-	14
CN13j	MAIN	CN28	↔	REAR_UNIT	-	10

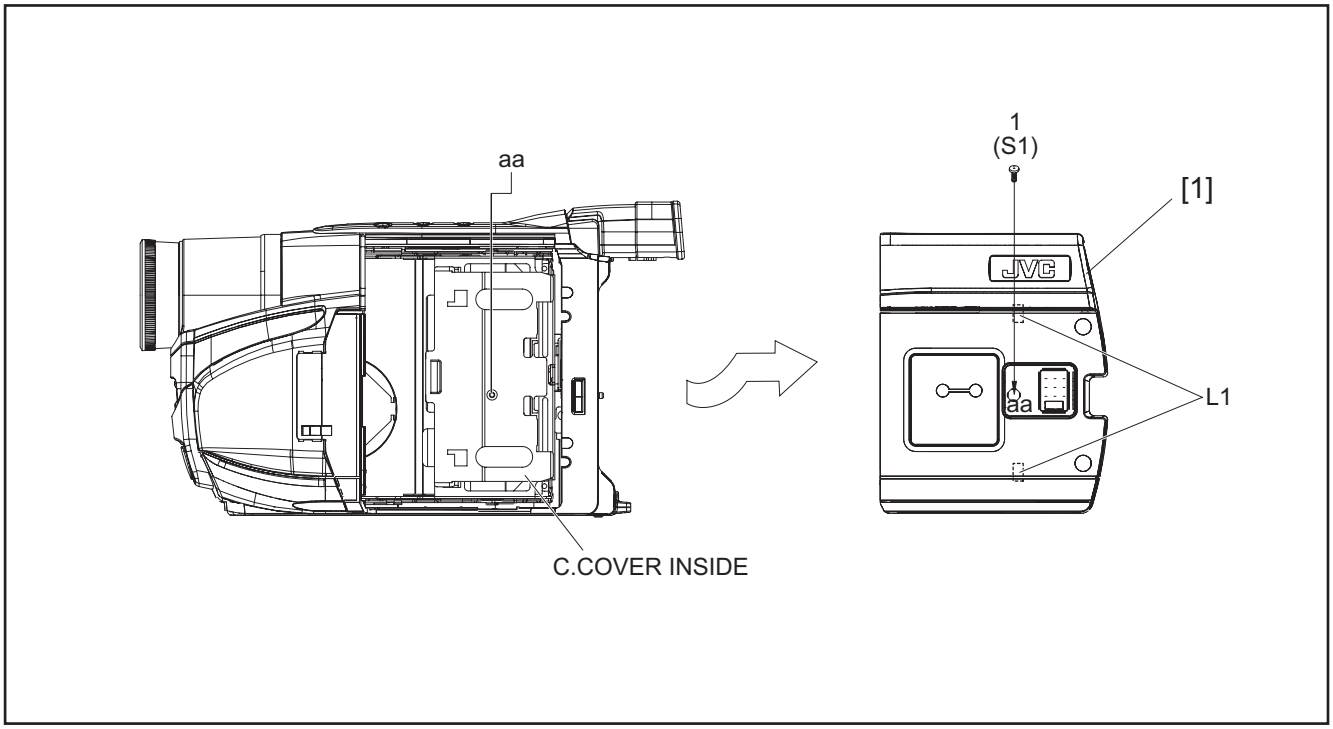


Fig.FA1

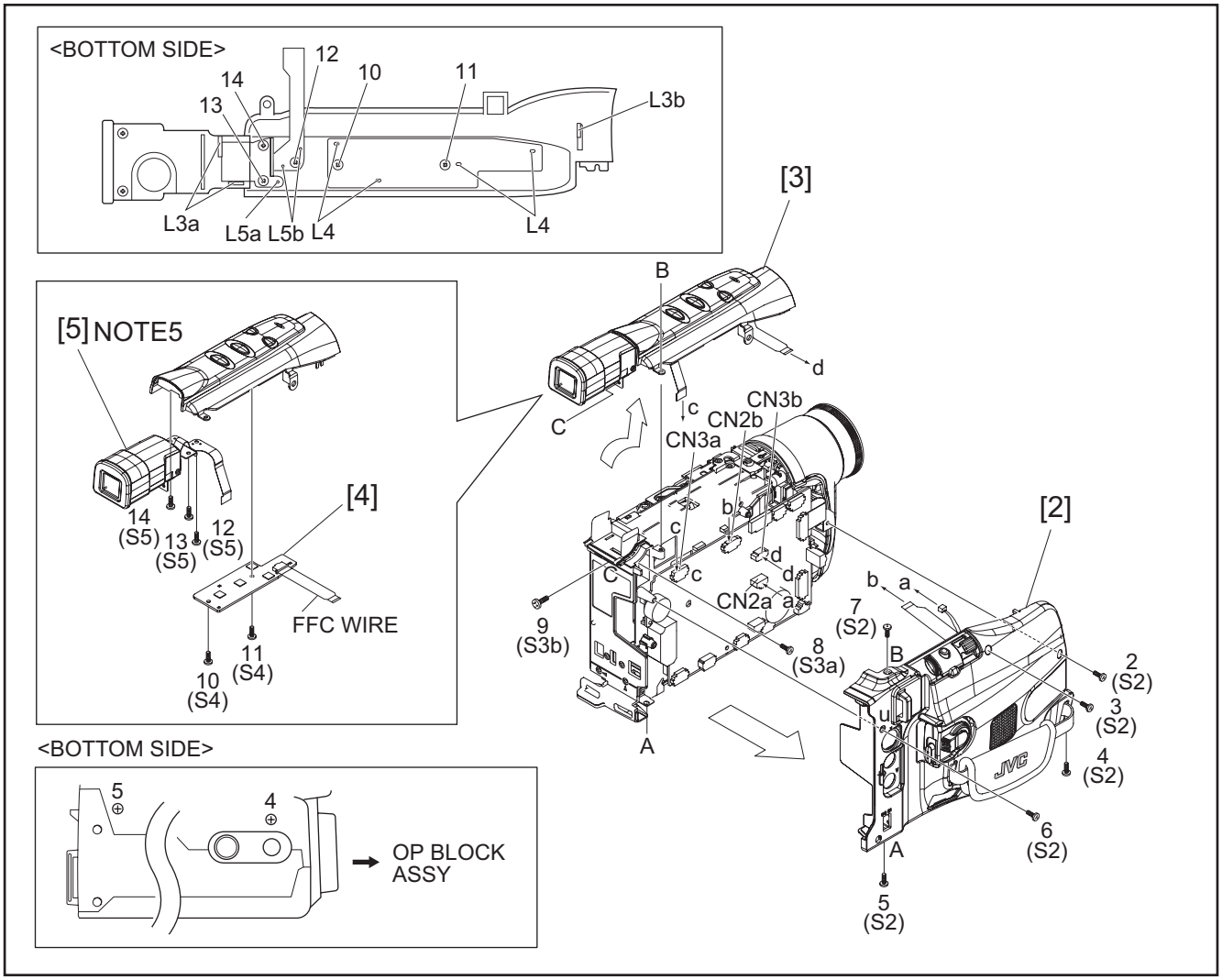


Fig.FA2

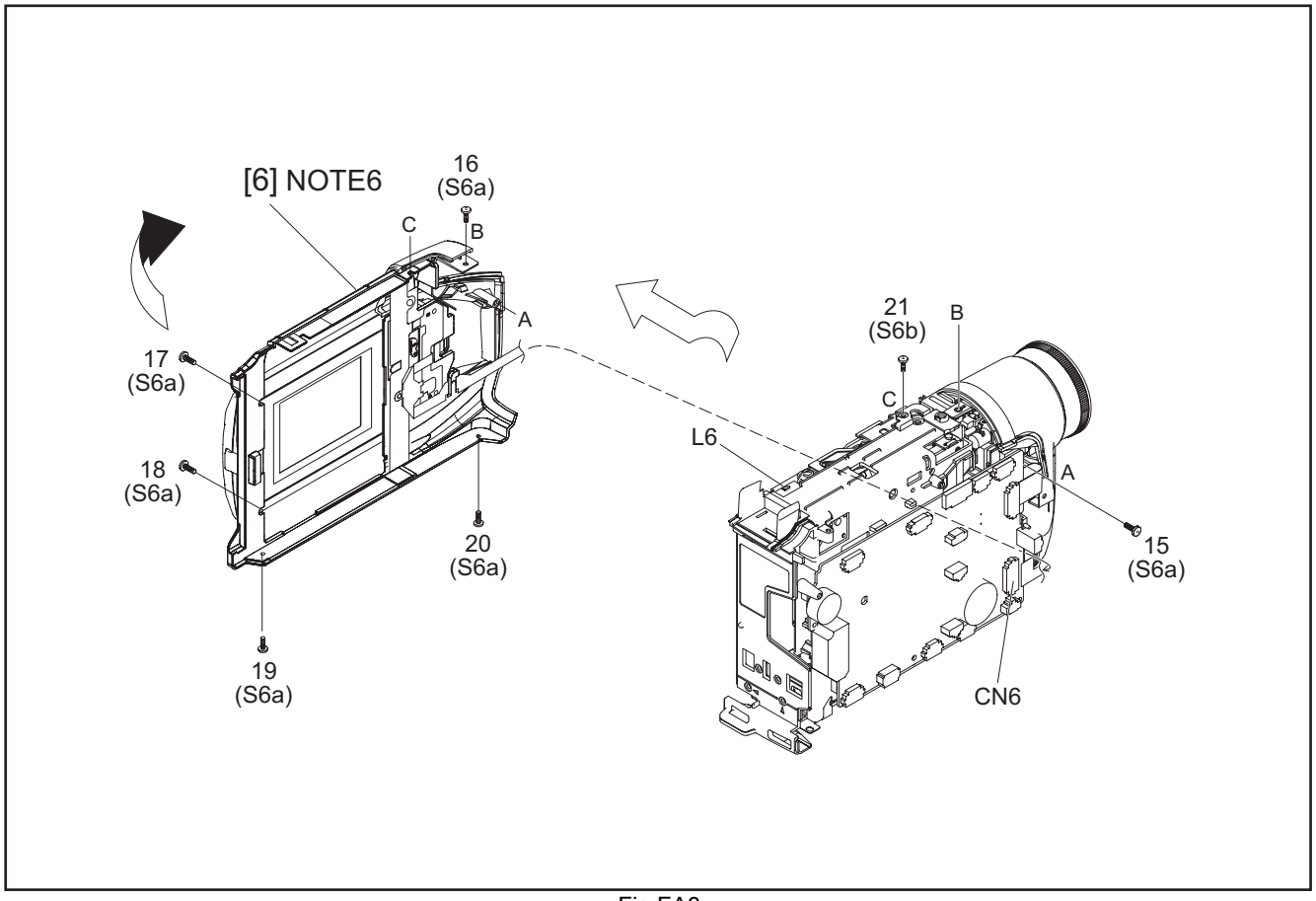


Fig.FA3

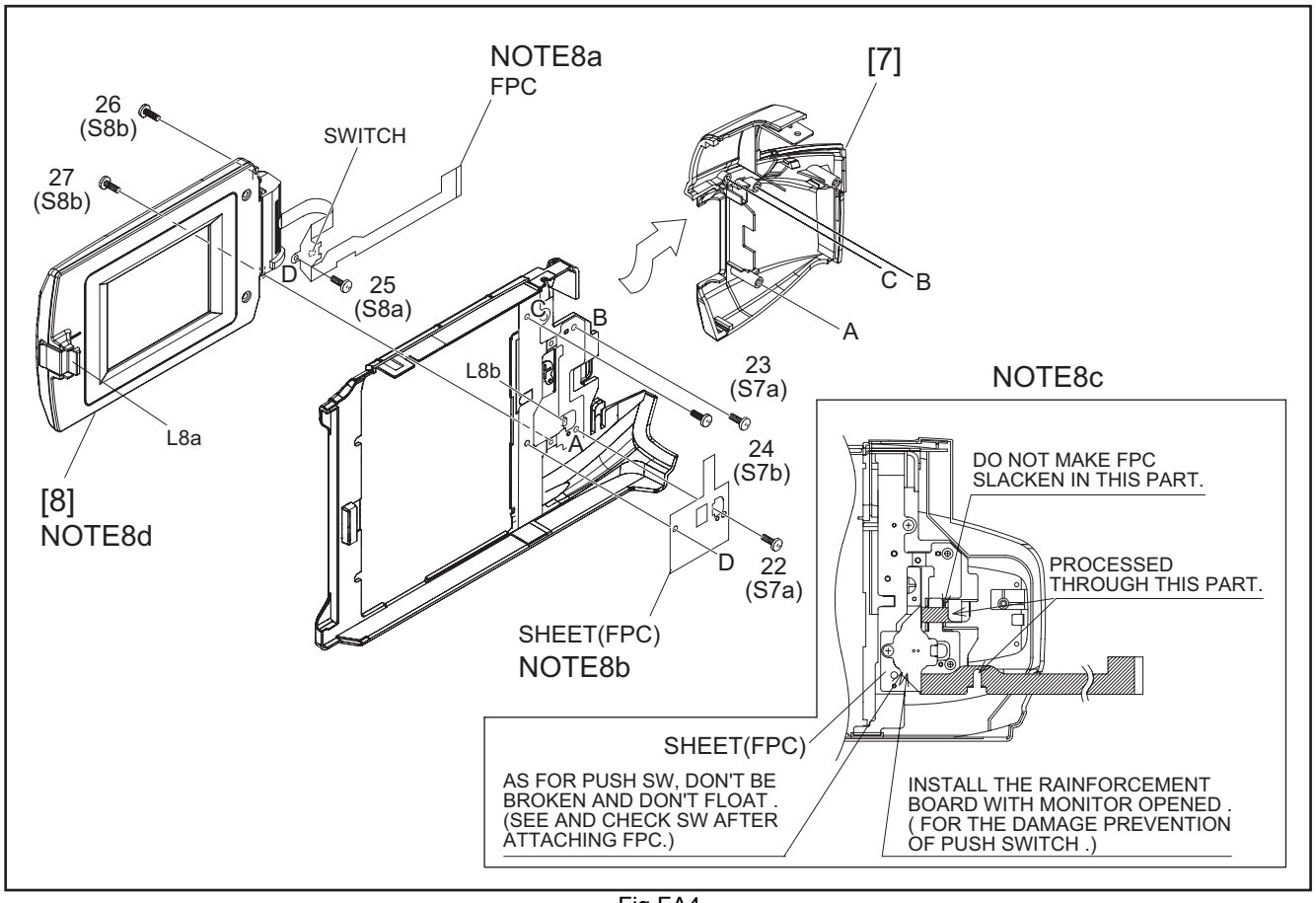


Fig.FA4

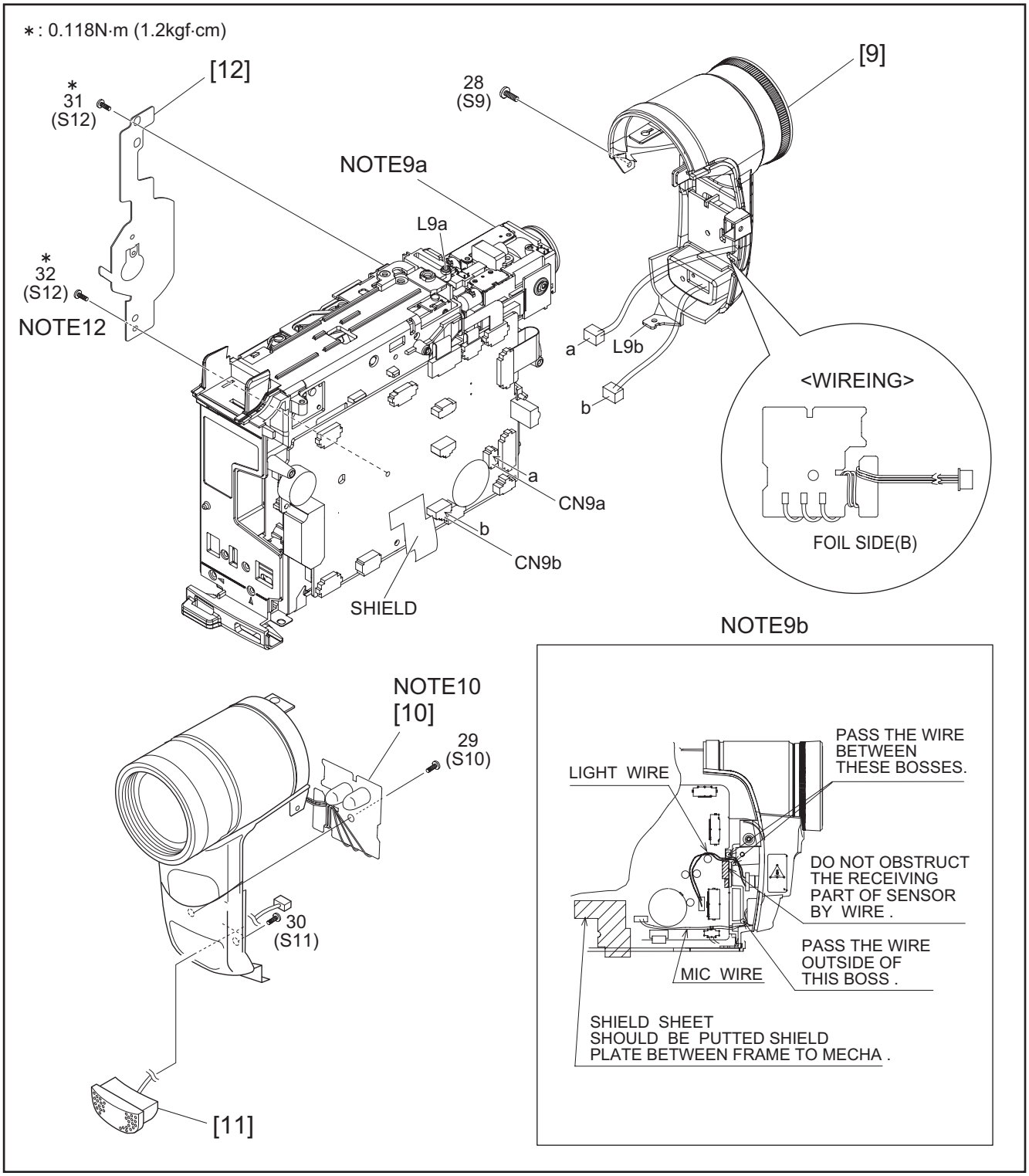

∗ : 0.118N·m (1.2kgf·cm)
[12]
∗
31
(S12)
∗
32
(S12)
NOTE12
NOTE9a
L9a
28
(S9)
[9]
a
L9b
b
<WIREING>
FOIL SIDE(B)
a
CN9a
b
CN9b
SHIELD
NOTE9b
NOTE10
[10]
29
(S10)
30
(S11)
[11]
LIGHT WIRE
PASS THE WIRE
BETWEEN
THESE BOSSES.
DO NOT OBSTRUCT
THE RECEIVING
PART OF SENSOR
BY WIRE .
PASS THE WIRE
OUTSIDE OF
THIS BOSS .
MIC WIRE
SHIELD SHEET
SHOULD BE PUTTED SHIELD
PLATE BETWEEN FRAME TO MECHA .

Fig.FA5

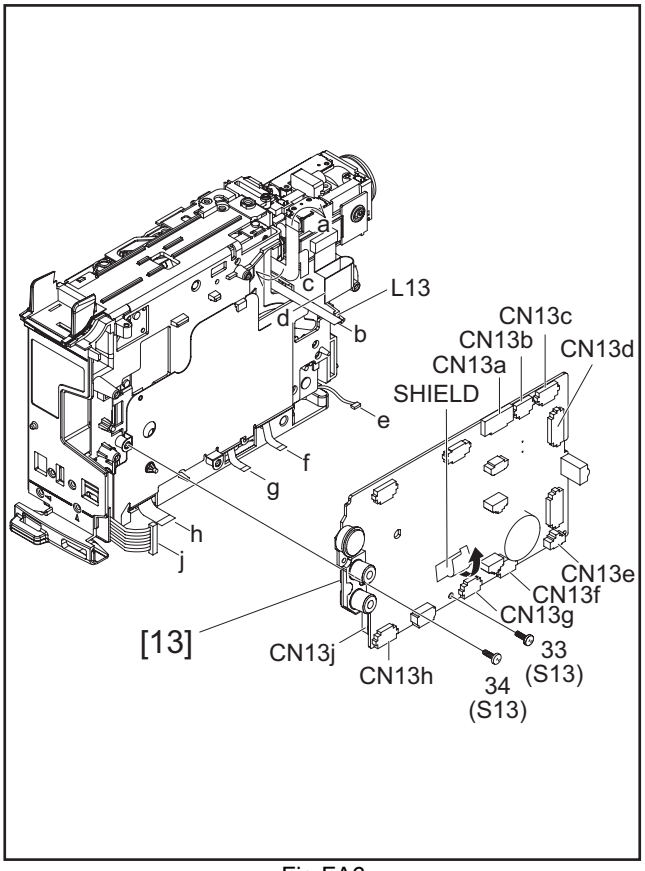


Fig.FA6

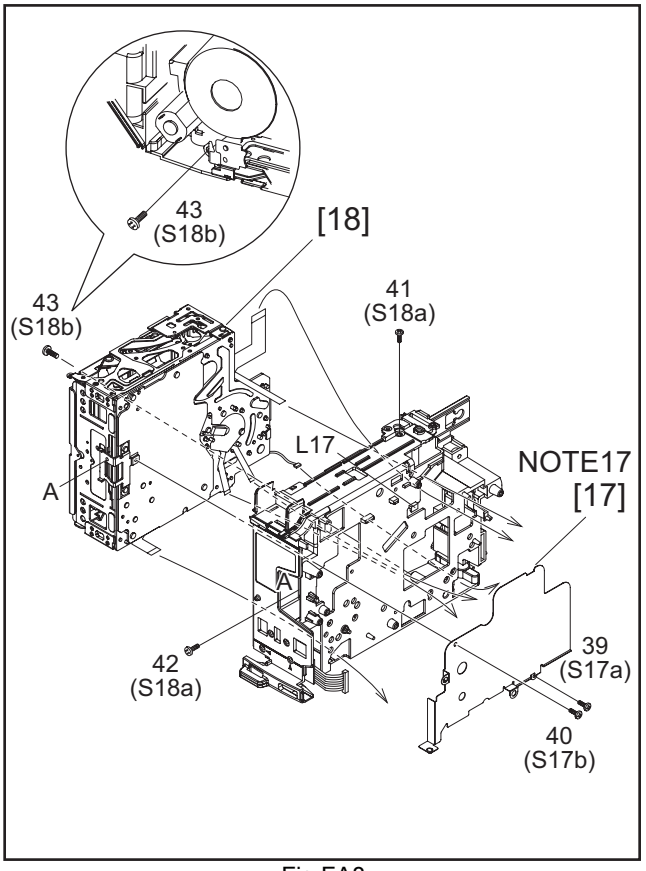


Fig.FA8

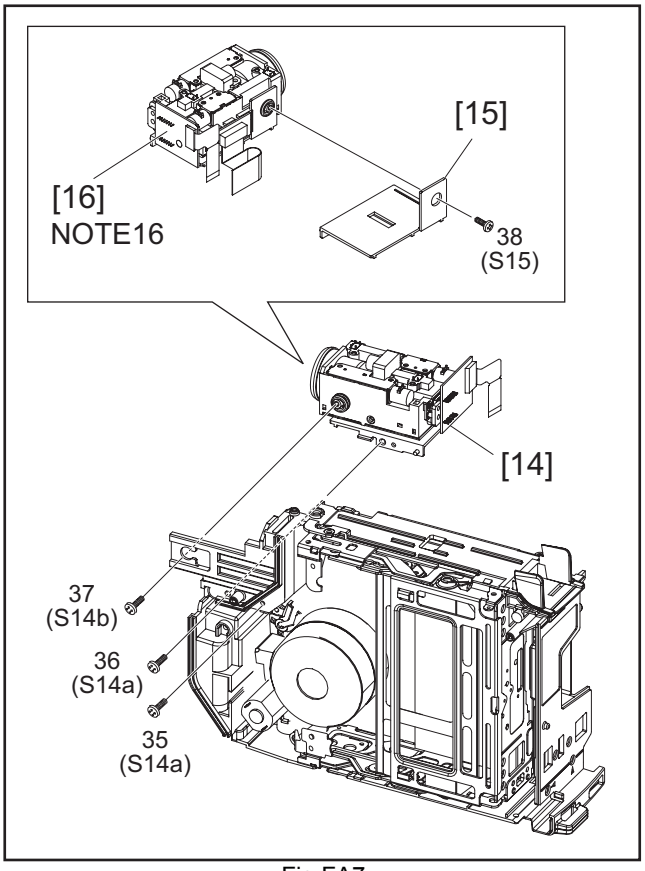


Fig.FA7

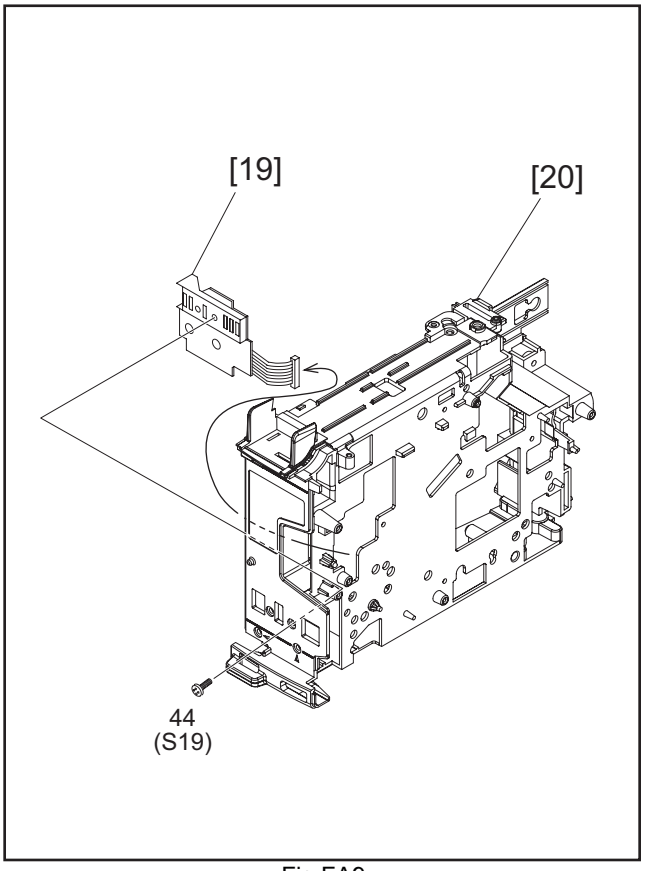


Fig.FA9

3.2.3 ASSEMBLY/DISASSEMBLY OF [5] VF ASSEMBLY

●Prior to disassembly

VF ASSEMBLY mainly consists of two CABINET PARTS (UPPER CASE (VF)/ BOTTOM CASE (VF)), and LCD SA/LENS SA inside.

As LCD SA and LENS SA are each consist of several parts, disassemble as required during the procedure.

●Disassembly procedure

STEP No.	PART NAME	Fig. No.	POINT	NOTE
[1]	UPPER CASE(VF) /BOTTOM CASE(VF)	VF1,2	2(S5a),2(S5b),2(L5a),2(L5b)	NOTE5a,b
[2]	VF BRACKET ASSY	VF3	2(S5c)	-
[3]	LENS SA/LCD SA /BWVF BOARD ASSY	VF4	L5c,d,CN5a,2(L5e),2(L5f)	NOTE5c,d
[4]	LENS SA	VF5	L5g,L5h,L5j	NOTE5e,f,g
[5]	LCD SA		L5k,L5m,L5n,L5p	NOTE5e

NOTE 5a :

Follow the wiring of the LCD MODULE FPC as shown in the Fig.VF1, and be sure to place the FPC within the BOTTOM CASE.

NOTE 5b :

Place the SUPPORT PLATE inside the BOTTOM CASE.

NOTE 5c :

Refer to the Fig. VF5 for the LENS SA disassembly.

NOTE 5d :

Refer to the Fig. VF5 for the LCD SA disassembly.

NOTE 5e :

During the procedure, be careful in handling the parts.

NOTE 5f :

When attaching the LEVER VF, be careful in positioning with the LENS ASSY.

Attach the LEVER VF by pulling the LENS ASSY to the EYE CUP side.

After the attachment, check whether the slide operation is smooth.

NOTE 5g :

When disassembling, be sure not to lose any parts.

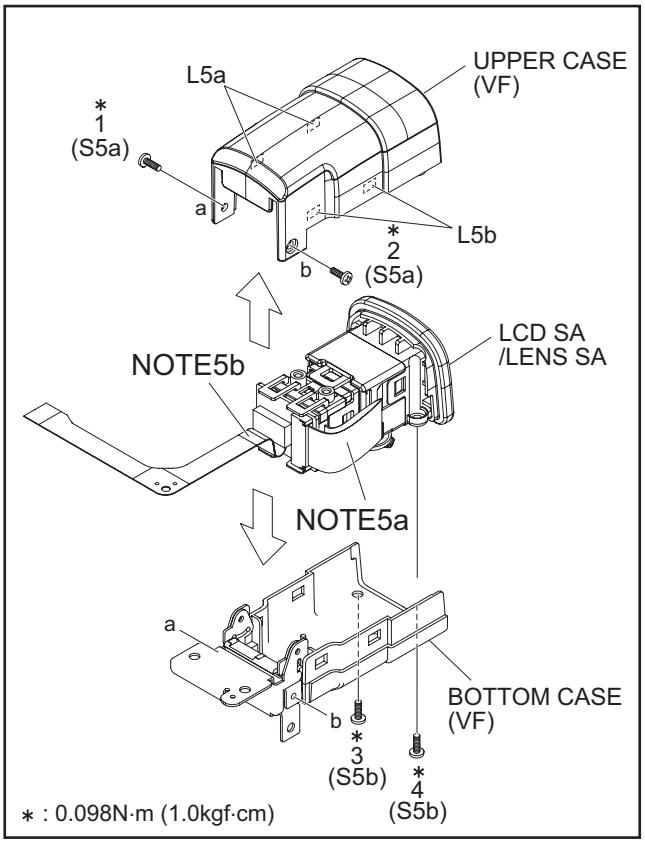


Fig.VF1

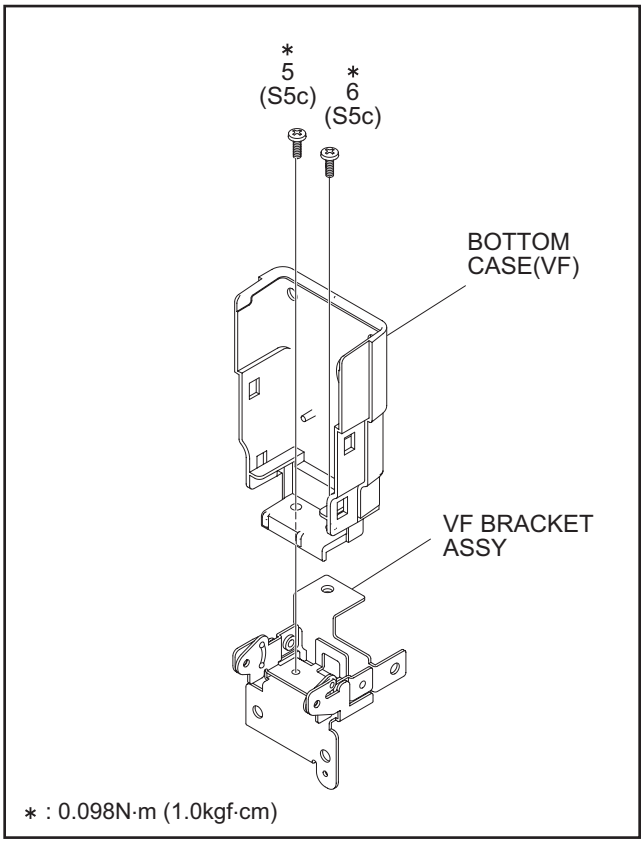


Fig.VF3

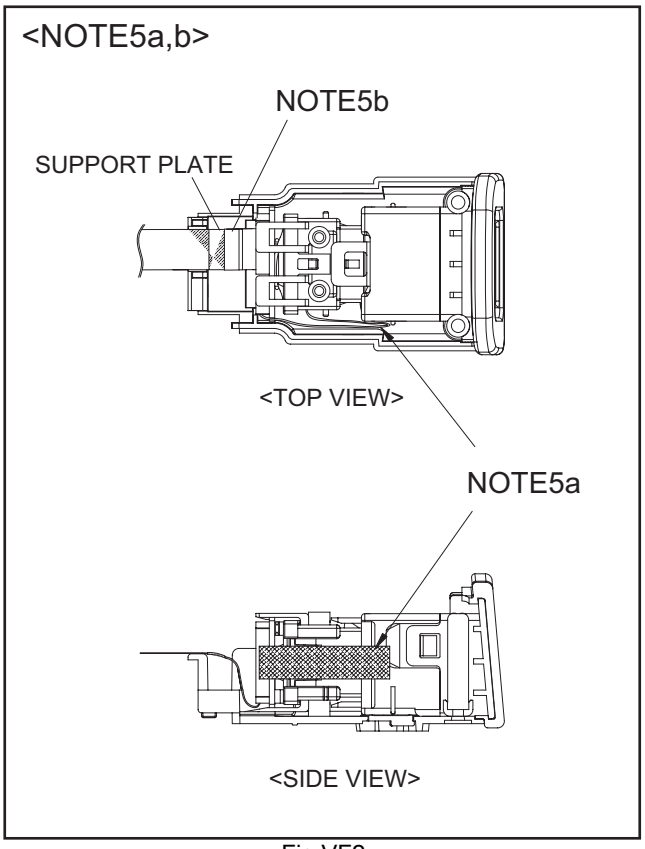


Fig.VF2

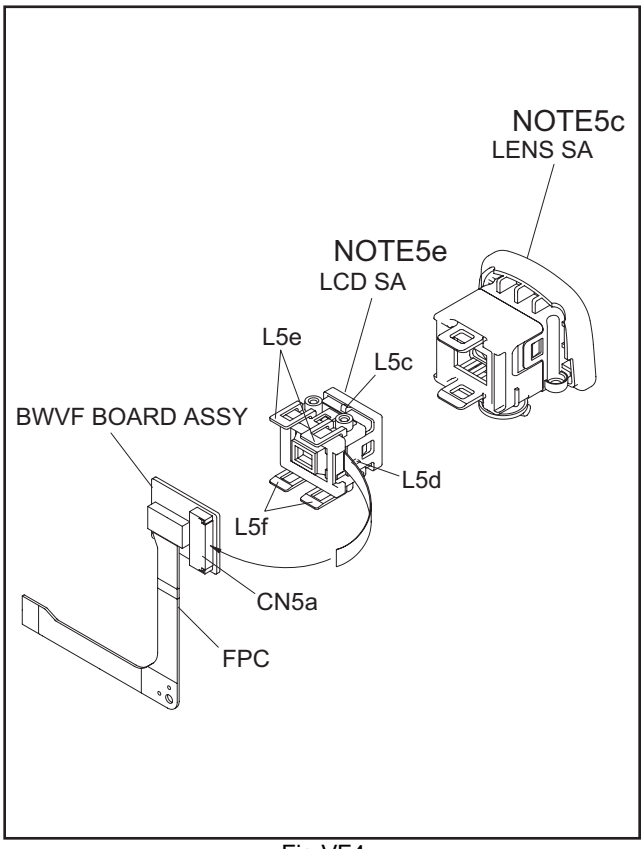


Fig.VF4

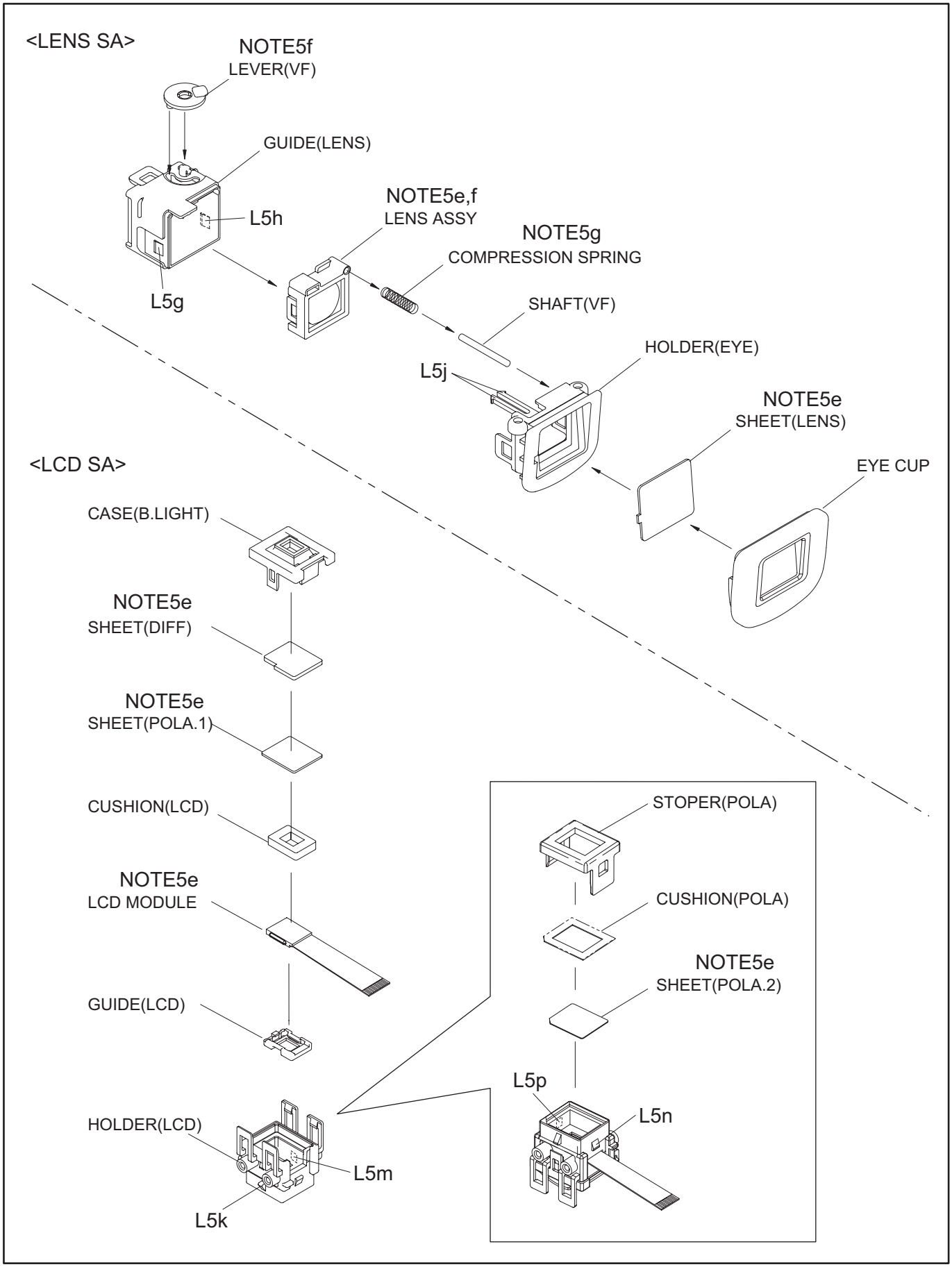

<LENS SA>
NOTE5f
LEVER(VF)
GUIDE(LENS)
L5h
L5g
NOTE5e,f
LENS ASSY
NOTE5g
COMPRESSION SPRING
SHAFT(VF)
HOLDER(EYE)
L5j
NOTE5e
SHEET(LENS)
EYE CUP
<LCD SA>
CASE(B.LIGHT)
NOTE5e
SHEET(DIFF)
NOTE5e
SHEET(POLA.1)
CUSHION(LCD)
NOTE5e
LCD MODULE
GUIDE(LCD)
HOLDER(LCD)
L5m
L5k
STOPER(POLA)
CUSHION(POLA)
NOTE5e
SHEET(POLA.2)
L5p
L5n

Fig.VF5

3.2.4 ASSEMBLY/DISASSEMBLY OF [8] MONITOR ASSEMBLY

●Disassembly of MONITOR ASSEMBLY

NOTE :

Be careful not to soil or scratch the monitor screen through the disassembly/assembly work.

(1) While removing the three screws 1 to 3 in numerical order and disengaging the five hooks (L8a and L8e) in alphabetical order, remove the MONITOR COVER ASSEMBLY.

NOTE 8a :

After removing the MONITOR COVER ASSEMBLY, be careful not to damage the FPC and the connector because the MONI. HINGE ASSEMBLY moves very easily.

(2) Unlock the connector 8a and then remove the FPC while lifting the MONI. HINGE ASSEMBLY upwards to remove it together with the FPC.

NOTE 8b :

When removing the FPC, unlock the connector first and then lift the MONI. HINGE ASSEMBLY upwards. Accordingly, the FPC is removed together with the MONI.HINGE ASSEMBLY.

(3) Unsolder the two soldered parts (SD8).

NOTE 8c :

When removing the MONITOR BOARD ASSEMBLY and the BACKLIGHT together, it is not necessary to unsolder the two soldered parts (SD8).

(4) Unlock the connector 8b, and disconnect the FPC from the connector 8b.

(5) Disconnect the FPC from MONITOR CASE ASSEMBLY.

(6) Remove the screw (4), and remove the MONITOR BOARD ASSEMBLY while lifting the side of MONITOR BOARD ASSEMBLY which has been attached with screw (4) upwards.

(7) Remove the BACKLIGHT and DIFF. SHEET (2.5) in this order.

(8) Remove the FRAME (LCD), the SPRING (LCD), and the LCD MODULE all together.

NOTE8d:

As the SPRING (LCD) and the LCD MODULE are attached to the FRAME (LCD), remove them all together for the parts exchange.

(9) Remove the S. CASE (2.5) by removing the two hooks (L8h, L8j) in order.

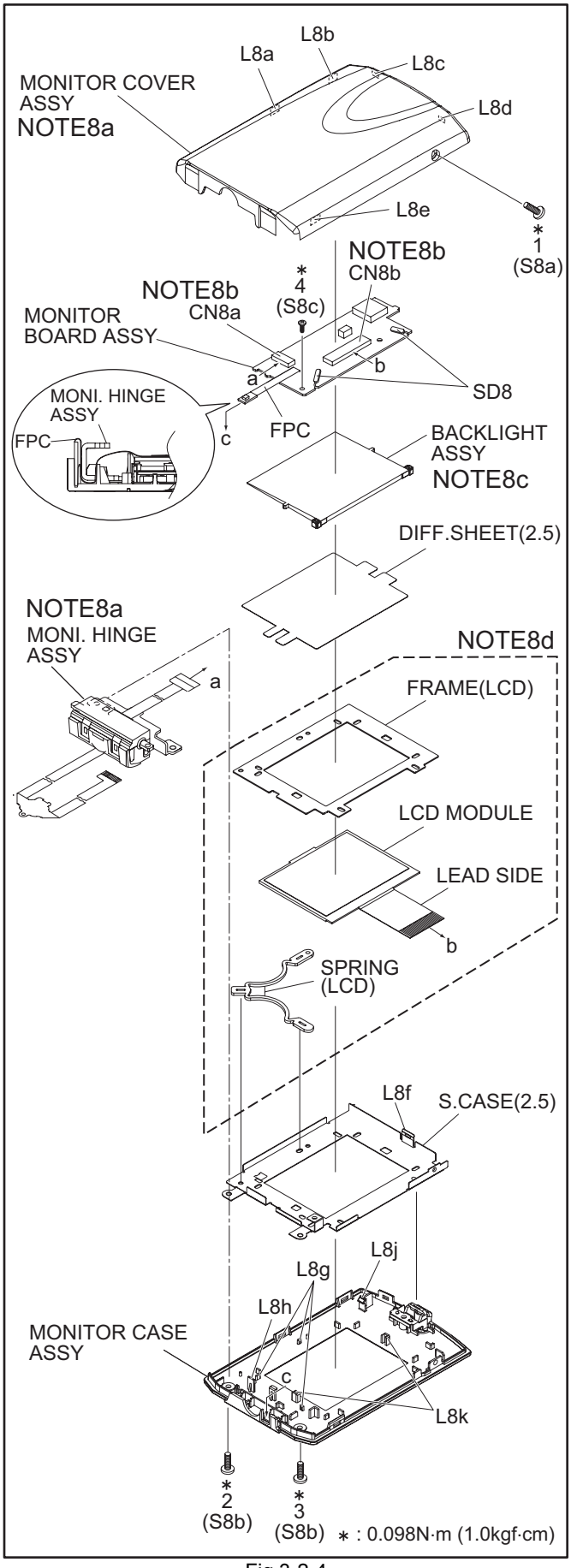


Fig.3-2-4

3.2.5 ASSEMBLY AND DISASSEMBLY OF [16] OP BLOCK ASSEMBLY AND CCD BOARD ASSEMBLY

●Precautions

(1) Take care in handling the CCD IMAGE SENSOR, OP LPF and lens components when performing maintenance etc., especially with regard to surface contamination, attached dust or scratching. If fingerprints are present on the surface they should be wiped away using either a silicon paper, clean chamois or the cleaning cloth.

(2) The CCD IMAGE SENSOR may have been shipped with a protective sheet attached to the transmitting glass. When replacing the CCD IMAGE SENSOR, do not peel off this sheet from the new part until immediately before it is mounted in the OP BLOCK ASSEMBLY.

(3) The orientation of the OP LPF is an important factor for installation. If there is some marking on the OP LPF, be sure to note it down before removing and to reassemble it very carefully as it was referring to the marking.

●Disassembly of CCD BOARD ASSEMBLY and CCD BASE ASSEMBLY

(1) Unsolder the CCD BOARD ASSEMBLY by the 14 points (SD16a) and then remove it.

(2) Remove the two screws (1, 2) and remove the CCD BASE ASSEMBLY.

(3) Remove the SPACER.

(4) Remove the SHEET.

(5) Remove the OP LPF.

●Assembly of CCD BASE ASSEMBLY and CCD BOARD ASSEMBLY

(1) Set the OP LPF to the OP BLOCK ASSEMBLY so that the OP side touches the OP BLOCK ASSEMBLY.

NOTE 16a:

Pay careful attention to the orientation of the OP LPF.

(2) Set the SHEET to the OP LPF so that the OP LPF stays in the right position.

(3) Attach the SPACER to the OP BLOCK ASSEMBLY.

(4) Set the CCD BASE ASSEMBLY to the OP BLOCK ASSEMBLY, and fasten them together with the two screws (1, 2).

(5) Set the CCD BOARD ASSEMBLY to the CCD BASE ASSEMBLY, and then solder the fourteen points (SD16a) on the CCD BOARD ASSEMBLY.

●Replacement of service repair parts

The service repair parts for the OP BLOCK ASSEMBLY are as listed below.

Before replacement of these parts, remove the BRACKET (OP BLOCK ASSEMBLY) as required.

Take special care not to disconnect any of the FPC wires or cause any damage due to soldering (excessive heating).

(1) FOCUS MOTOR

(2) ZOOM MOTOR

(3) IRIS MOTOR UNIT

NOTE 16b:

When replacing the FOCUS MOTOR or the ZOOM MOTOR, solder the FPC at a space of about 0.5 mm above the terminal pin.

NOTE 16c:

The IRIS MOTOR UNIT includes the FPC ASSEMBLY and two sensors.

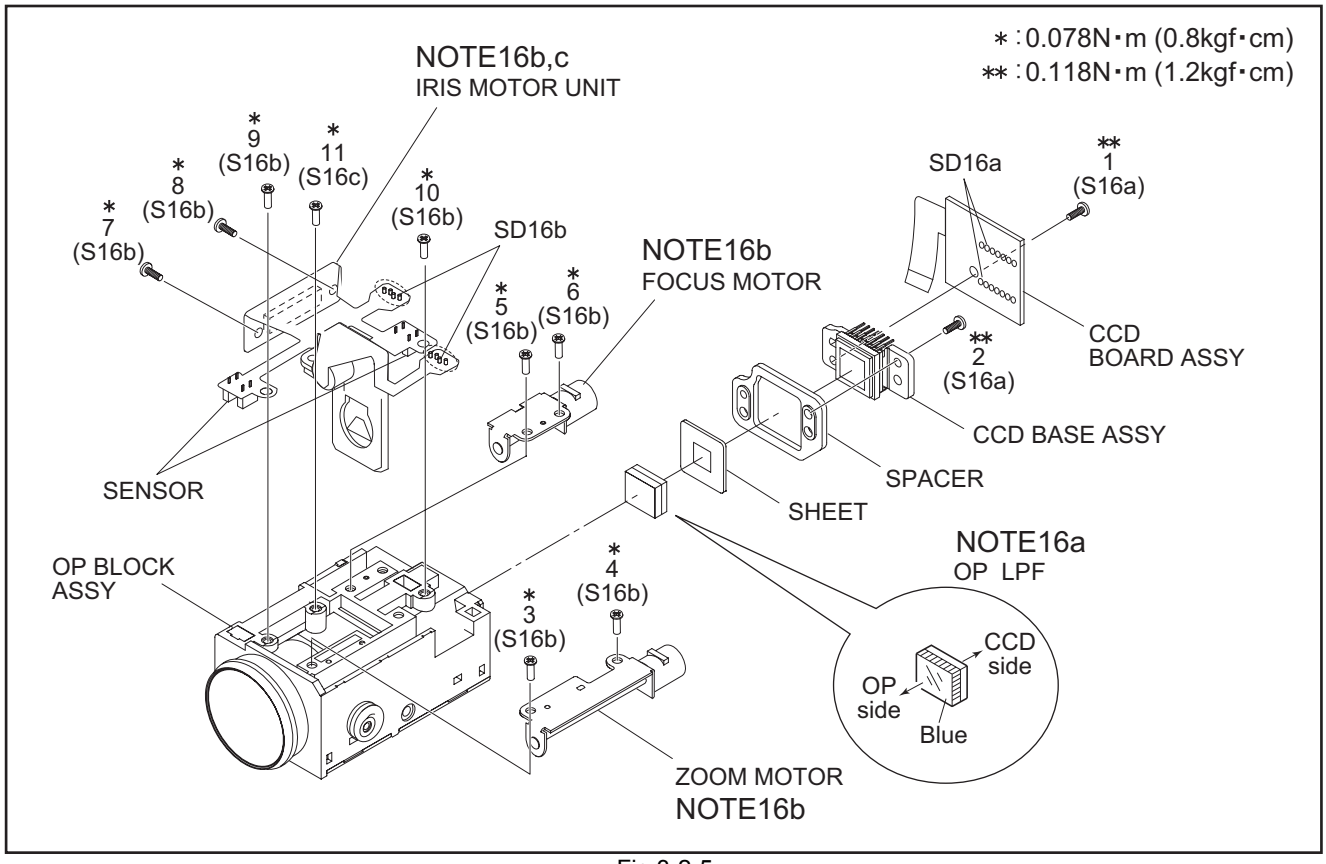


Fig.3-2-5

SECTION 4
ADJUSTMENT

4.1 PREPARATION

4.1.1 Precaution

Camera system and deck system of this model are specially adjusted by using PC.
However, if parts such as the following are replaced, an adjustment is required. The adjustment must be performed in a Service Center equipped with the concerned facilities.

- EEP ROM (IC102 of MAIN board)
- OP BLOCK ASSEMBLY
- VF ASSEMBLY
- MONITOR ASSEMBLY

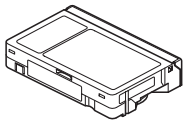
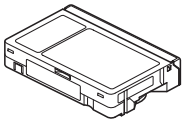
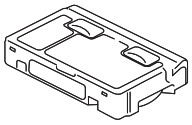
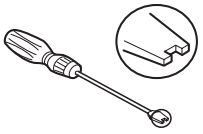
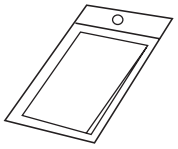
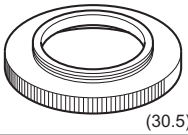
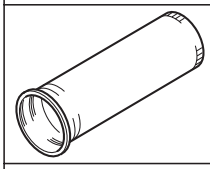
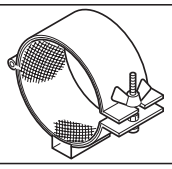
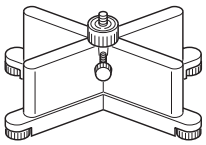
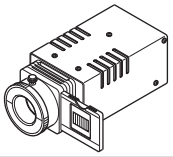
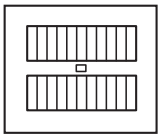
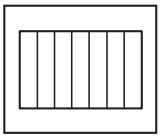
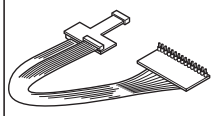
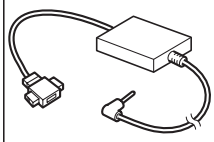
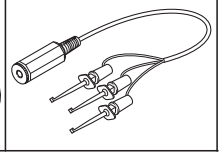
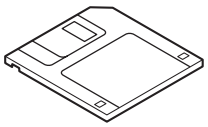
In the event of malfunction with electrical circuits, first find a defective portion with the aid of proper test instruments as shown in the following electrical adjustment procedure, and then commence necessary repair/ replacement/adjustment.

- In observing chip TP, use IC clips, etc. to avoid any stress. Prior to replacement of chip parts (especially IC), remove the solder completely to prevent peeling of the pattern.
- Use a patch cord if necessary. As for a patch cord, see the BOARD INTERCONNECTIONS.
- Since connectors are fragile, carefully handle them in disconnecting and connecting the FPC.

4.1.2 REQUIRED TEST EQUIPMENT

- Personal computer (for Windows)
- Color TV monitor
- Oscilloscope (dual-trace type, observable 100MHz or higher frequency). The one observable 300 MHz or higher frequency is recommended.
- Digital voltmeter
- DC power supply or AC adapter
- Frequency counter (with threshold level adjuster)

4.1.3 TOOLS REQUIRED FOR ADJUSTMENT

Alignment tape MHP-C	Alignment tape MHP-LC	Cassette torque meter PUJ50431-2
		
Roller driver PTU94002-2	Cleaning Cloth KSMM-01	Conn. ring YTU92001-109
		 (30.5)
INF Adjustment Lens YTU92001B	INF Adjustment Lens Holder YTU94087	Camera Stand YTU93079
		
Light box Assembly YTU93096A	Gray Scale Chart YTU94133A	Color Bar Chart YTU94133C
		
Jig Connector Cable YTU93082G	PC Cable QAM0099-002	Communication Cable YTU93107B
		
Service Support System YTU94057-93		
		

- **Alignment tape**
  To be used for check and adjustment of interchangeability of the mechanism.
  (Video: Color bar signal, Audio: Non-signal)
- **Cassette torque meter**
  This is used to cheek the back tension and play torque during mechanism adjustment.
- **Roller driver**
  To be used to turn the Roller driver to adjustment of the linearity of playback envelope.
- **Cleaning Cloth**
  Recommended the Cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

- **Conn. ring**
  The connector ring to attach the INF lens to the head of the OP lens. For the usage of the Conn.ring.
- **INF Adjustment Lens**
  To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.
- **INF Adjustment Lens Holder**
  To be used together with the Camera stand (11) for operating the Videocamera in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring. For the usage of the INF lens holder, refer to the Service Bulletin No. YA-SB-10035.
- **Camera Stand**
  To be used together with the INF adjustment lens holder. For the usage of the Camera stand, refer to the Service Bulletin No. YA-SB-10035.
- **Light box Assembly**
  To be used for adjustment of the camera system. For the usage of the Light box assembly, refer to the Service Bulletin No. YA-SB-10035.
- **Gray Scale Chart**
  To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.
- **Color Bar Chart**
  To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.
- **Jig Connector Cable**
  To be connected to the Jig connector jack of the main board and used for measurement and adjustment.
- **PC Cable**
  To be used to connect the Videocamera and a personal computer with each other when a personal computer issued for adjustment.
- **Communication Cable**
  Connect the Communication cable between the PC cable and Jig connector cable when performing a PC adjustment.
- **Service Support System**
  To be used for adjustment with a personal computer. Software can be downloaded also from JS-net.

4.2 JIG CONNECTOR CABLE CONNECTION

■ **Connection procedure**

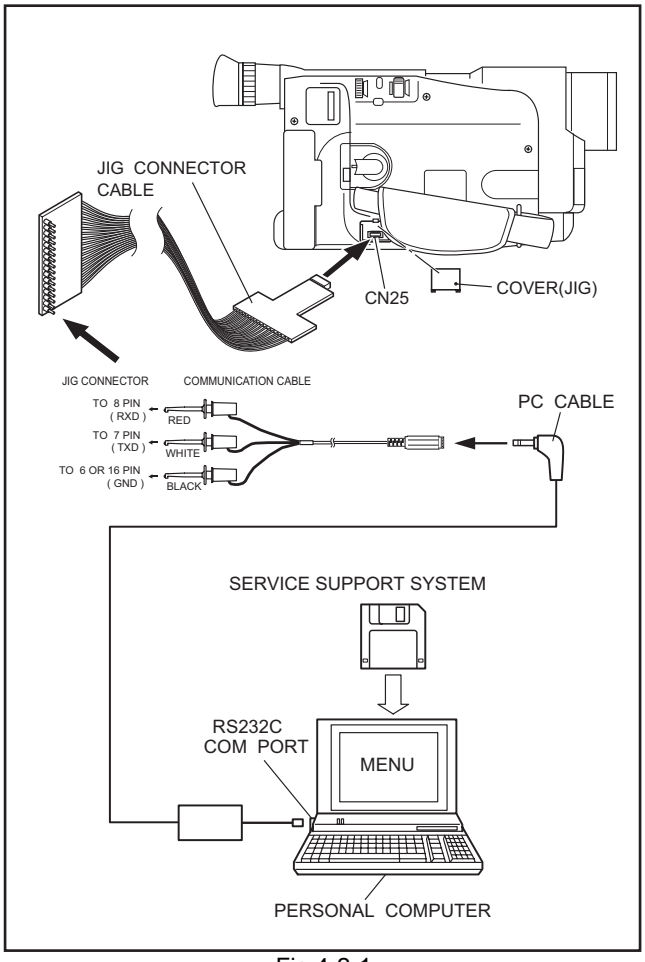


Fig.4-2-1

■ **Jig connector diagrams**

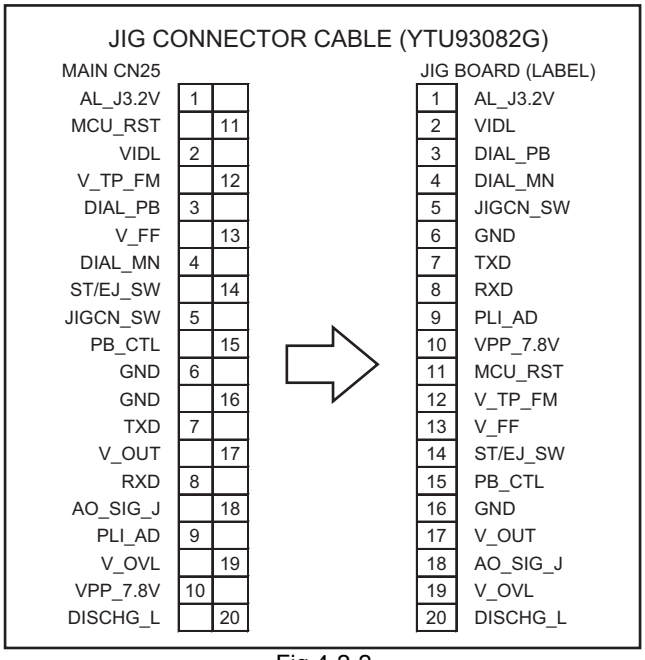


Fig.4-2-2

4.3 MECHANISM COMPATIBILITY ADJUSTMENT

4.3.1 Tape transport adjustment

Mechanism adjustment is needed when DRUM ASSEMBLY or a part of the tape transport system is replaced. To protect tapes from damage, first clean the tape transport system, next confirm that nothing is wrong with the tape transport system by using a tape that can be disposed of, and then perform adjustment with alignment tape. Some exterior parts should be removed before some adjustment procedures, depending on the procedures.

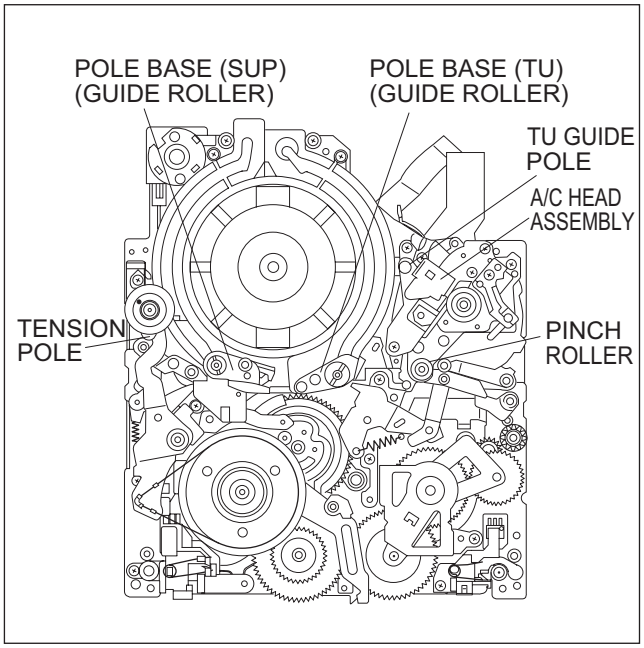


Fig.4-3-1

4.3.2 Back tension

Remove the exterior parts attached to CASSETTE HOUSING ASSEMBLY so that scales of CASSETTE TORQUE METER can be read.

- CASE COVER(M) ASSEMBLY
- C. COVER INSIDE

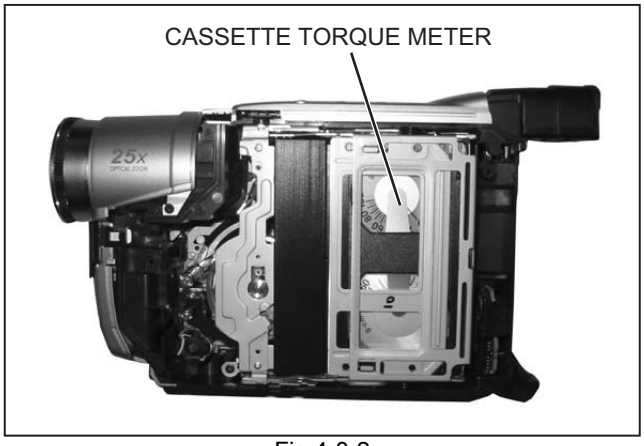


Fig.4-3-2

(1) Set a cassette torque meter onto the deck and measure the back tension in standard PB mode to confirm that the back tension is $0.93x10^{-3}$ - $1.71x10^{-3}$ N•m.

(2) If not, replace the tension band.
When the value widely fluctuates in the measurement, replace the SUPPLY REEL DISK.

(3) With the CASSETTE TORQUE METER, confirm that the play torque is $1.47x10^{-3}$ - $2.45x10^{-3}$ N•m.
If necessary, replace the center pulley unit.

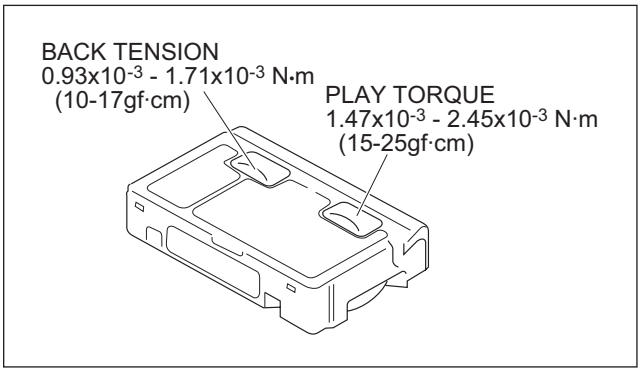


Fig.4-3-3

4.3.3 Tape pattern

Remove the exterior parts attached to the UPPER CASE ASSEMBLY so that the guide roller beside the DRUM ASSEMBLY can be rotated.

- CASE COVER(M) ASSEMBLY
- LOWER CASE ASSEMBLY
- TOP COVER ASSEMBLY
- UPPER CASE (M) ASSEMBLY

NOTE:

In performing adjustment, it is recommended that LOWER CASE ASSEMBLY and TOP OPE UNIT are attached to the main body for better operation and safety.

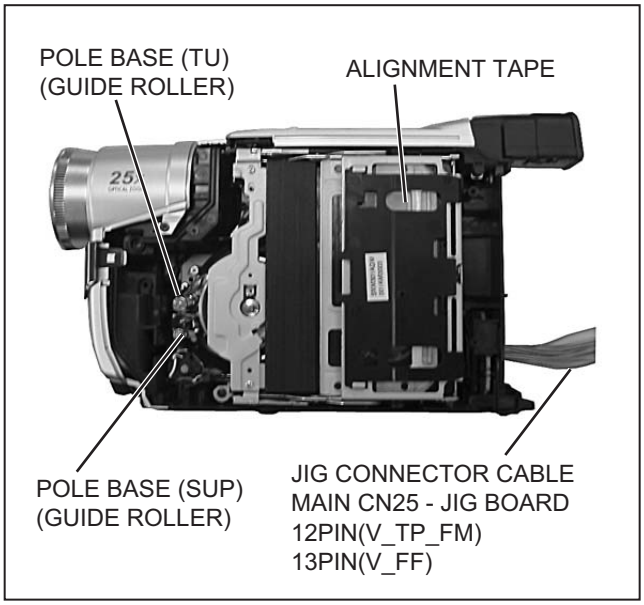


Fig.4-3-4

(1) Remove the Cover (JIG) shown on Fig.4-2-1.

(2) Connect the JIG CONNECTOR CABLE to CN25 on the MAIN BOARD ASSEMBLY as shown on Fig. 4-2-2.

(3) Observe signal at V_TP_FM with external trigger from V_FF on the JIG CONNECTOR CABLE.

(4) Playback the SP stairstep signal of the alignment tape and maximize the FM waveform by the tracking button.

(5) Set the tracking control to the center position by simultaneously pressing the tracking (-) and (+) buttons and maximize the FM waveform by the tracking button.

(6) If the observed FM waveform is not flat, adjust the height of the SUPPLY of TAKE-UP GUIDE ROLLER with the roller driver.

NOTE:

To prevent the tape from damage, turn the guide rollers slowly.

(7) By operating the tracking button (both in + and - directions) in the manual tracking mode, vary the output level of the FM waveform from maximum to minimum and vice versa to confirm that the waveform varies nearly in a flat shape.
(8) When the FM waveform breaks in the level varying process, subtly adjust the height of guide rollers at every breaking point so that the waveform varies as flat as possible.
Repeat the above steps 6. and 7. several times to confirm that the waveform is flat as a whole.
(9) Playback the SP stairstep signal of alighment tape and adjust the tracking control to maximize the FM waveform, confirm that FM waveform variation is always flat.
(10) Record the signal and play it back in both of the SP and EP modes, and confirm that the FM waveform is flat in both modes.

NOTE:
Among the above-mentioned adjustment steps, the items of No.9 and No.10 are needed for the EP model only.

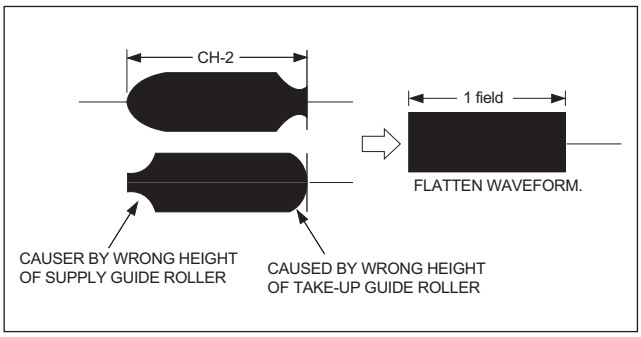


Fig.4-3-5

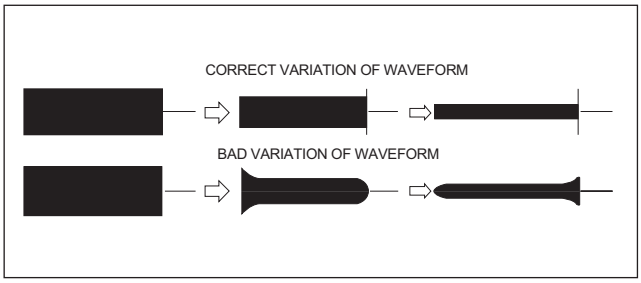


Fig.4-3-6

(11) Through the above steps, confirm that there occur no wrinkling and damage in the tape around the PINCH ROLLER and TU GUIDE POLE whenever the deck is in operation of Loading/Unloading, Search Rewind and at mode change from Search Rewind to play mode. If wrinkling or damage in the tape occurs around the TU GUIDE POLE, adjust the angle (slant) of the A/C HEAD to the tape. So that the tape normally runs along the lower flange of the GUIDE POLE.

4.3.4 A/C head height & azimuth

Remove the exterior parts attached to the UPPER CASE ASSEMBLY so that the screws around the A/C HEAD ASSEMBLY can be tighten or loosen.

- CASE COVER(M) ASSEMBLY
- LOWER CASE ASSEMBLY
- TOP COVER ASSEMBLY
- UPPER CASE(M) ASSEMBLY
- FRONT FRAME ASSEMBLY

NOTE:
In performing adjustment, it is recommended that LOWER CASE ASSEMBLY and TOP OPE UNIT are attached to the main body for better operation and safety.
(1) Remove the Cover (JIG) shown on Fig.4-2-1.
(2) Connect the JIG CONNECTOR CABLE to CN25 on the MAIN BOARD ASSEMBLY.
(3) Connect the channel-1 scope probe to the audio output (AO_SIG_J) and connect the channel-2 scope probe to PB CTL.
(4) Playback the alignment tape.
(5) Set the tracking to its center range by pressing the (+) and (-) tracking controls simultaneously.
(6) Adjust screws**[A]**, **[B]** and **[C]** approximately 45 degrees in the same direction to obtain maximum audio output and CTL signal levels.
(7) As a final fine adjustment, adjust screw **[B]** for minimum signal level fluctuation and screw **[C]** for maximum output signal level.

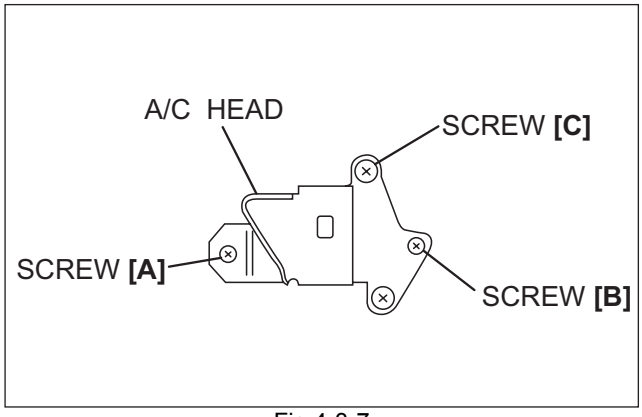


Fig.4-3-7

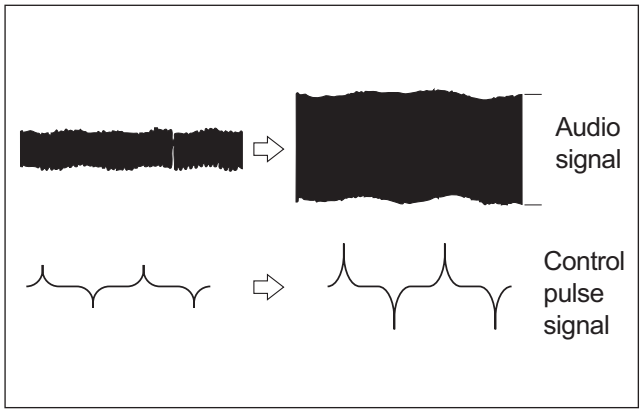


Fig.4-3-8

4.3.5 Phase of control head (X value)

Note:

Remove the exterior parts attached to the UPPER CASE ASSEMBLY so that the screws around the A/C HEAD ASSEMBLY can be tighten or loosen.

(1) Connect the JIG CONNECTOR CABLE to CN25 on the MAIN BOARD ASSEMBLY.

(2) Playback the SP stairstep signal of the alignment tape and observe signal at V_TP_FM with external trigger from V_FF on the JIG CONNECTOR CABLE.

(3) Operate the tracking button in the center and manual tracking mode by pressing the tracking (+) and (-) buttons and confirm that the FM output level is maximum at the center position as shown in Fig. 4-3-10.

(4) If necessary, slightly loosen the setscrews **[D]** and **[E]** and insert the Tweezers into the notch and guide hole to move the A/C HEAD fully in the direction of the capstan to the extent.

(5) Gradually move the A/C HEAD toward the drum to find the position where the FM output level maximum for the first time (A' - B' in Fig. 4-3-10).

(6) Fine adjust the phase of the A/C HEAD and tighten the screws **[D]** and **[E]** at the point A.

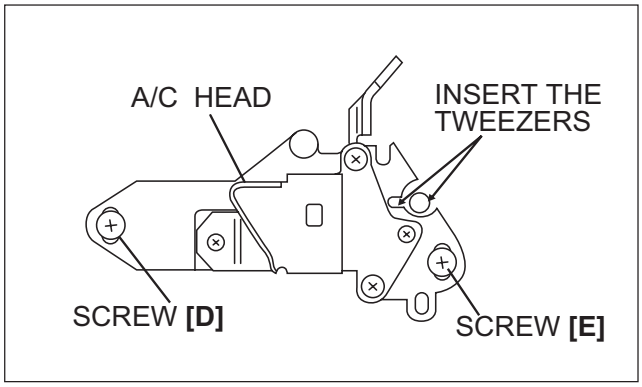


Fig.4-3-9

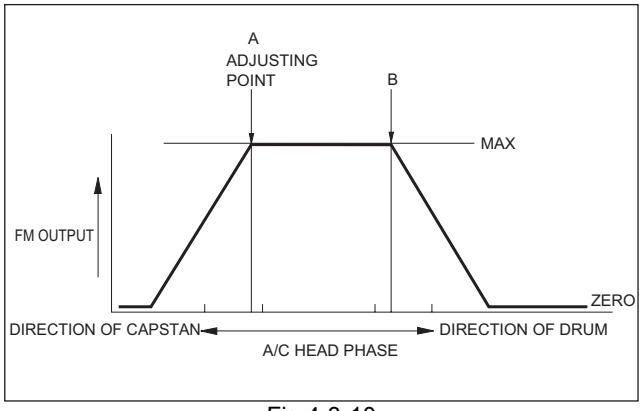


Fig.4-3-10

CABINET PARTS AND ELECTRICAL PARTS(1)

Symbol No.	[1]	[2]						[3]		[4]		[5]			[6]							[7]		
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Place to stick screw									*															
Reference drawing (Fig.No.)	FA1	FA2													FA3									
Screw tightening torque	a																							

CABINET PARTS AND ELECTRICAL PARTS(2)

Symbol No.	[8]			[9]	[10]	[11]	[12]		[13]	[14]				[15]	[16]	[17]		[18]			[19]	[20]
Removing order of screw	25	26	27	28	29	30	31	32	33	34	35	36	37	38	-	39	40	41	42	43	44	-
Place to stick screw		*	*												-							-
Reference drawing (Fig.No.)	FA4			FA5					FA6	FA7						FA8					FA9	
Screw tightening torque	a						b		a													

[5]VF ASSY

Symbol No.	[5]					
Removing order of screw	1	2	3	4	5	6
Place to stick screw	*	*				
Reference drawing (Fig.No.)	VF1				VF3	
Screw tightening torque	d					

[8]MONITOR ASSY

Symbol No.	[8]			
Removing order of screw	1	2	3	4
Place to stick screw				
Reference drawing (Fig.No.)	3-2-4			
Screw tightening torque	d			

[16]OP BLOCK ASSY/CCD BOARD ASSY

Symbol No.	[16]										
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11
Place to stick screw											
Reference drawing (Fig.No.)	3-2-5										
Screw tightening torque	b	c									

NOTE:

1) * (This mark shows where to attach the screws) : Do not reuse the screws because the screw lock bond was applied to prevent the screws from loosening. Prepare the specified screws and use them in place of the removed screws.

2)Tightening torque for the screws

- There are setting limits of the torque value for the torque driver. If the value exceeds the setting value, take it as a rough measurement (reference value), and tighten the screw manually.
- The specified torque value is a recommended value of the initial assembly. Therefore, set the value below the specified torque value in the assembling procedure. Be careful not to break either the screws or the screw holes.

a : 0.196N·m (2.0kgf·cm) b : 0.118N·m (1.2kgf·cm) c : 0.078N·m (0.8kgf·cm) d : 0.098N·m (1.0kgf·cm)

5.2 TAKE OUT CASSETTE TAPE

In the event that the set enters the emergency mode as it is loaded with a cassette tape and the cassette tape cannot be ejected with the EJECT button, manually, take it out of the set according to the following procedure.

NOTE :

- If the mechanism comes into the unloading mode as the cassette tape is not held by hand, it results in tape damage.
  (1) Disconnect the set from the power source.
  (2) Remove the LOWER CASE ASSEMBLY and TOP OPE UNIT (see Fig.FA2, page 8).
  (3) Connect a jumper wire to each pole of the LOADING MOTOR as shown by the magnified view (Fig. 5-2-1).
  (4) While holding down the cassette housing by hand, connect the jumper wires to a battery to run the mechanism to the EJECT position four unloading. If this unloading operation is performed as the cassette housing is not held down by hand, the front lid of the cassette may damage the tape when it is ejected.
  (5) For taking in the slack of the tape, run the mechanism to the EJECT position as the front lid of the cassette is left open, and turn the TAKE-UP GEAR in the forward direction to wind up the tape. After confirming that the tape has completely been wound up and the supply reel is idling, take the cassette tape out of the cassette housing.

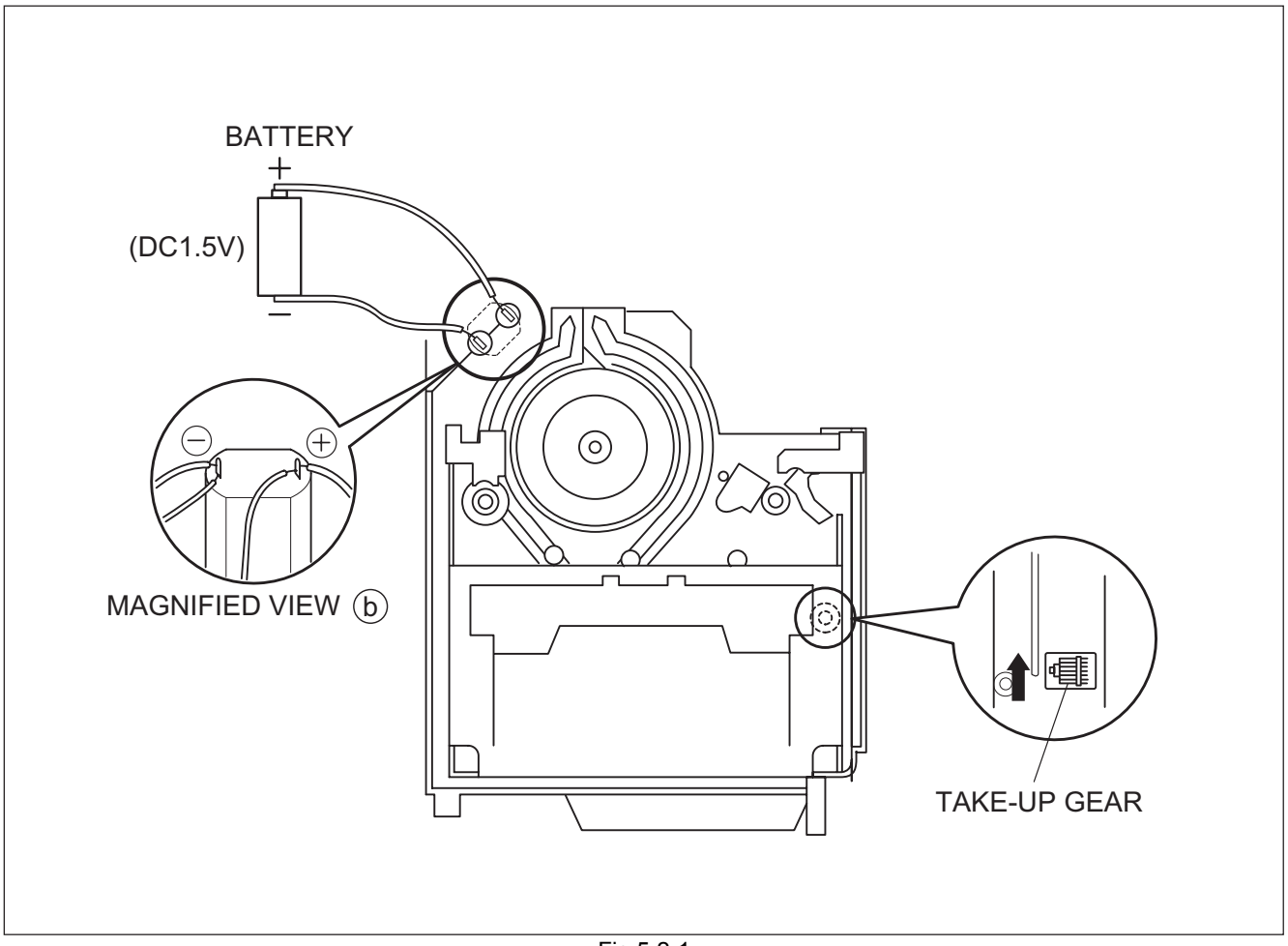


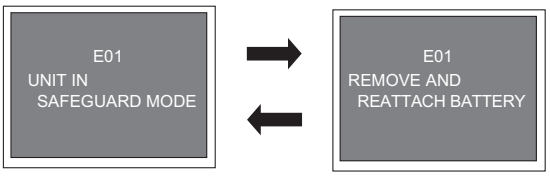
Fig.5-2-1

5.3 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the mechacon CPU, an error number (E01, as an example) is displayed in the electronic view finder. In every error status, such the message as shown below alternately appear over and over.

- In an emergency mode, all operations except turning on/off the POWER switch are ineffectual.

Example (in case of the error number E01):



E. VF	Symptom	Mode when observed
E06	CAPSTAN FG input absent	CAPSTAN rotation
E04	DRUM FG input absent	DRUM rotation
E03	SUPPLY REEL FG input absent	REC, PLAY, SEARCH, FF/REW
E02	Mode control motor rotates for more than 6 sec UNLOADING without shift to next mode.	UNLOADING
E01	Mode control motor rotates for more than 6 sec LOADING without shift to next mode.	LOADING
E00	Overtime the programming transaction	REC, PLAY

(NTSC)

JVC
Victor Company of Japan, Limited
Camcorder Category 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YF126)

Printed in Japan
VPT

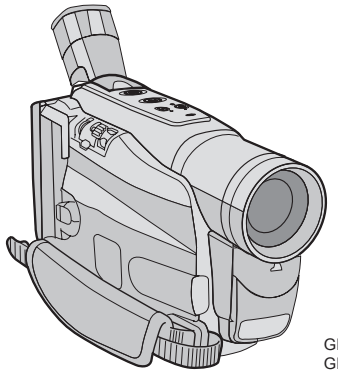
JVC

SCHEMATIC DIAGRAMS

COMPACT VHS CAMCORDER

GR-AXM18US, GR-SXM38US

CD-ROM No.SML200602



S-VHS C
Super VHS
Super VHS ET

GR-AXM18USM[M6A622],
GR-SXM38USM[M6C623]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade).

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No.YF126SCH
2006/2

CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components indentified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ(1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in µF, (P: PF).
3) All inductance values are in µH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

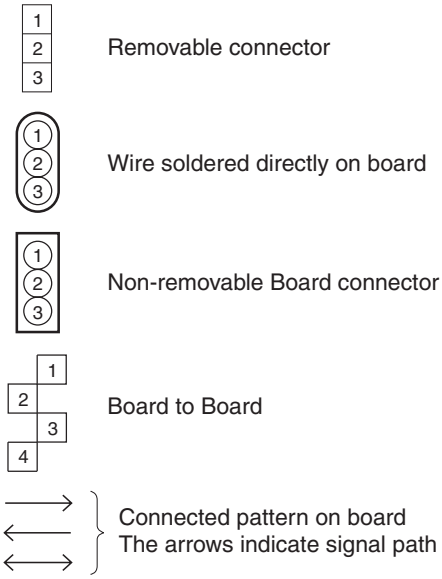
Note: The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

2. Indications of control voltage

AUX : Active at high.

$\overline{\text{AUX}}$ or AUX(L) : Active at low.

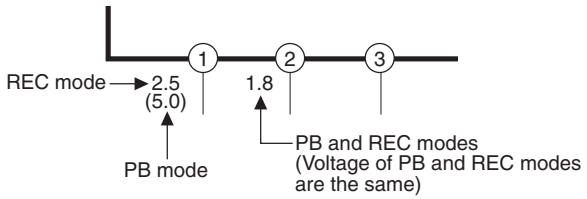
3. Interpreting Connector indications



Note: For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"

4. Voltage measurement

1) Regulator (DC/DC CONV) circuits
   REC : Colour bar signal.
   PB : Alignment tape (Colour bar).
   — : Unmeasurable or unnecessary to measure.
2) Indication on schematic diagram
   Voltage indications for REC and PB mode on the schematic diagram are as shown below.

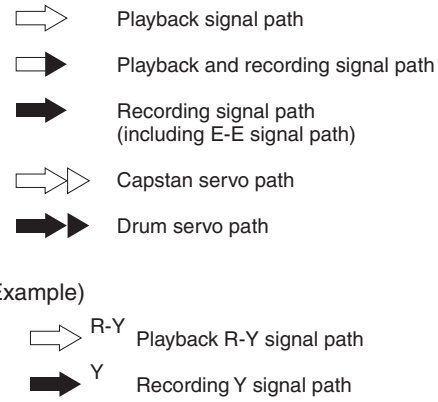


Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Signal path Symbols

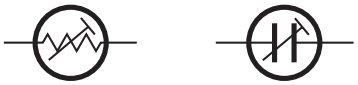
The arrows indicate the signal path as follows.

NOTE : The arrow is DVC unique object.



6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

CIRCUIT BOARD NOTES

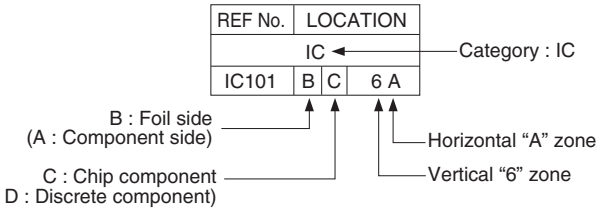
1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

rts location are indicated by guide scale on the circuit board.

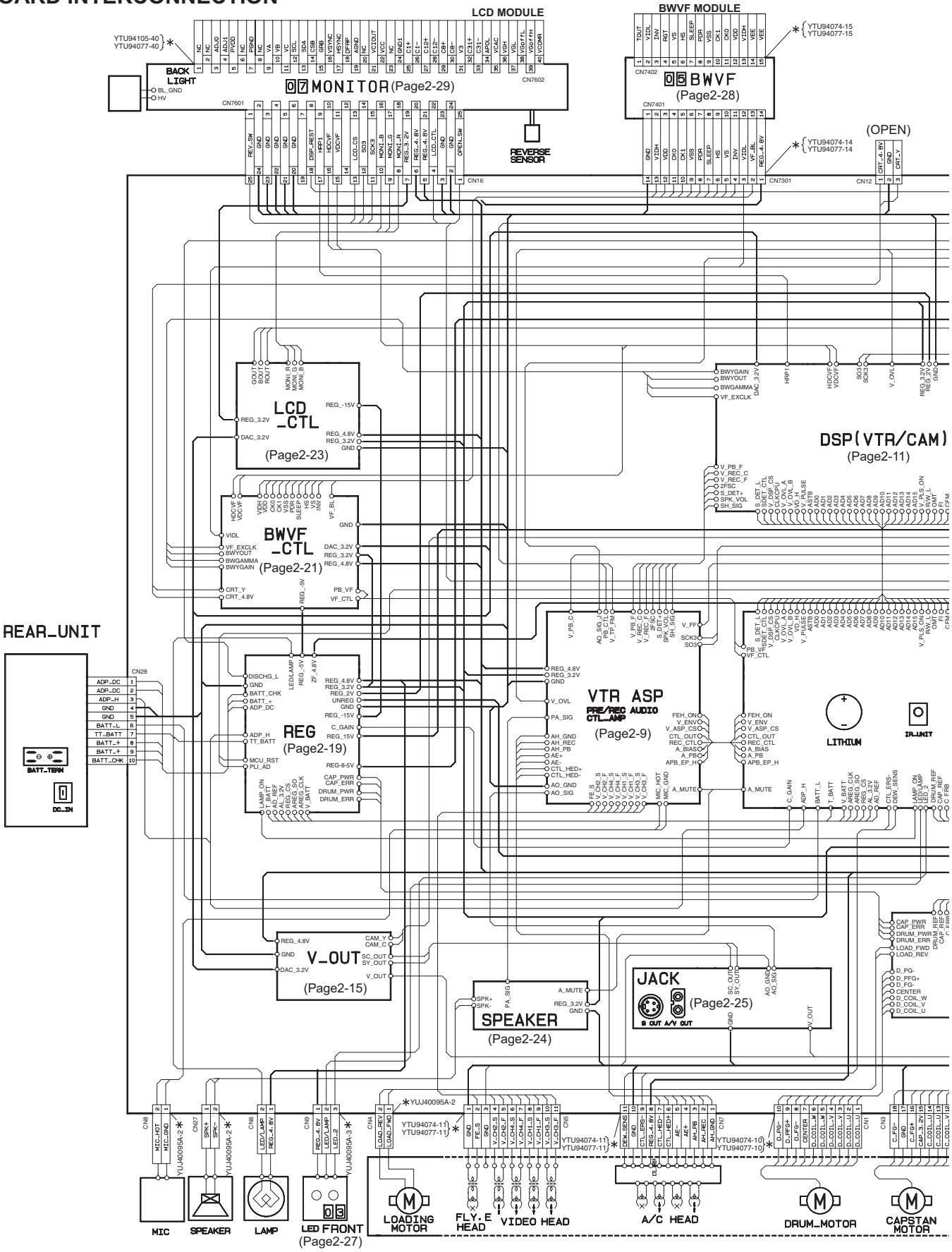
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.

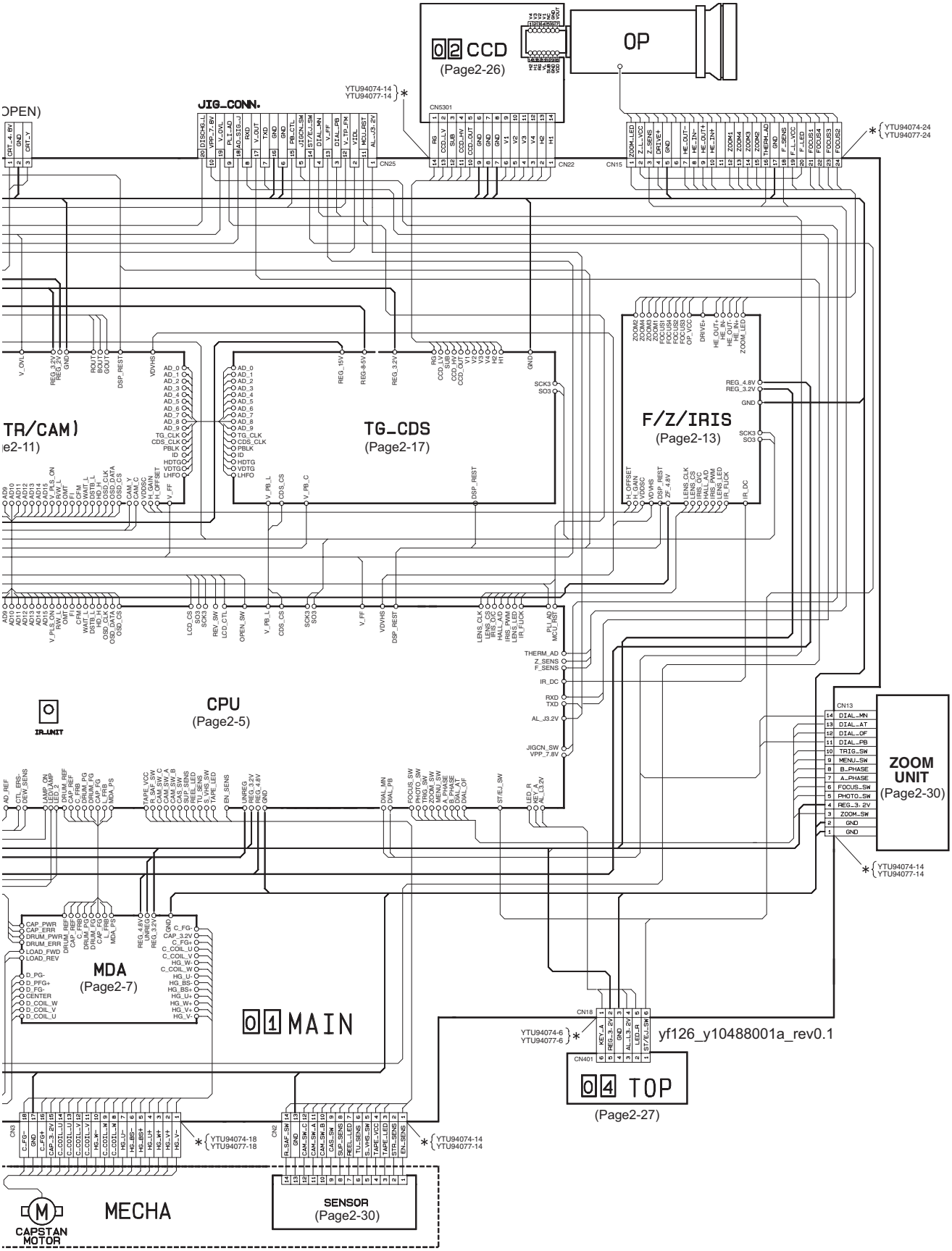


Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

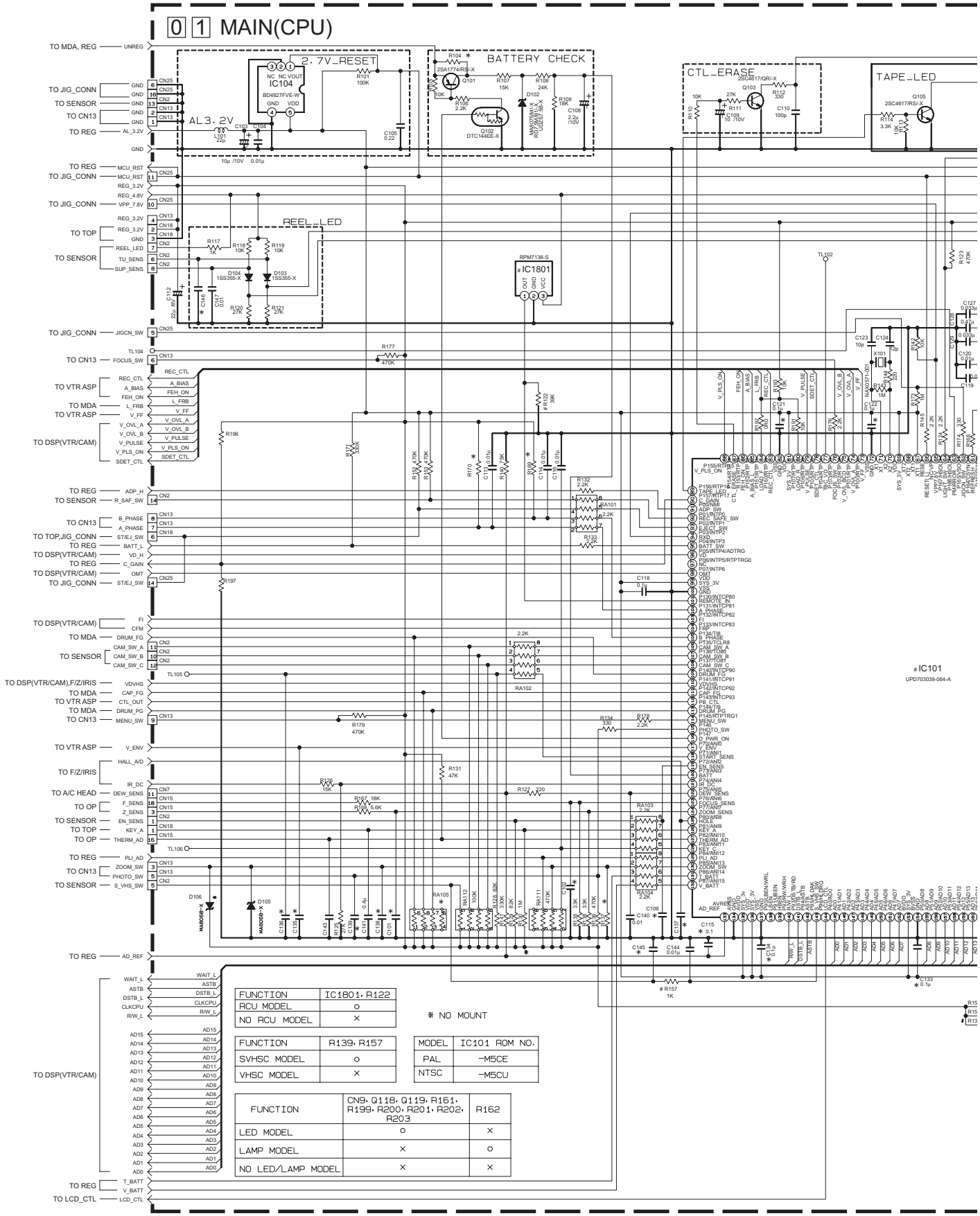
■ BOARD INTERCONNECTION



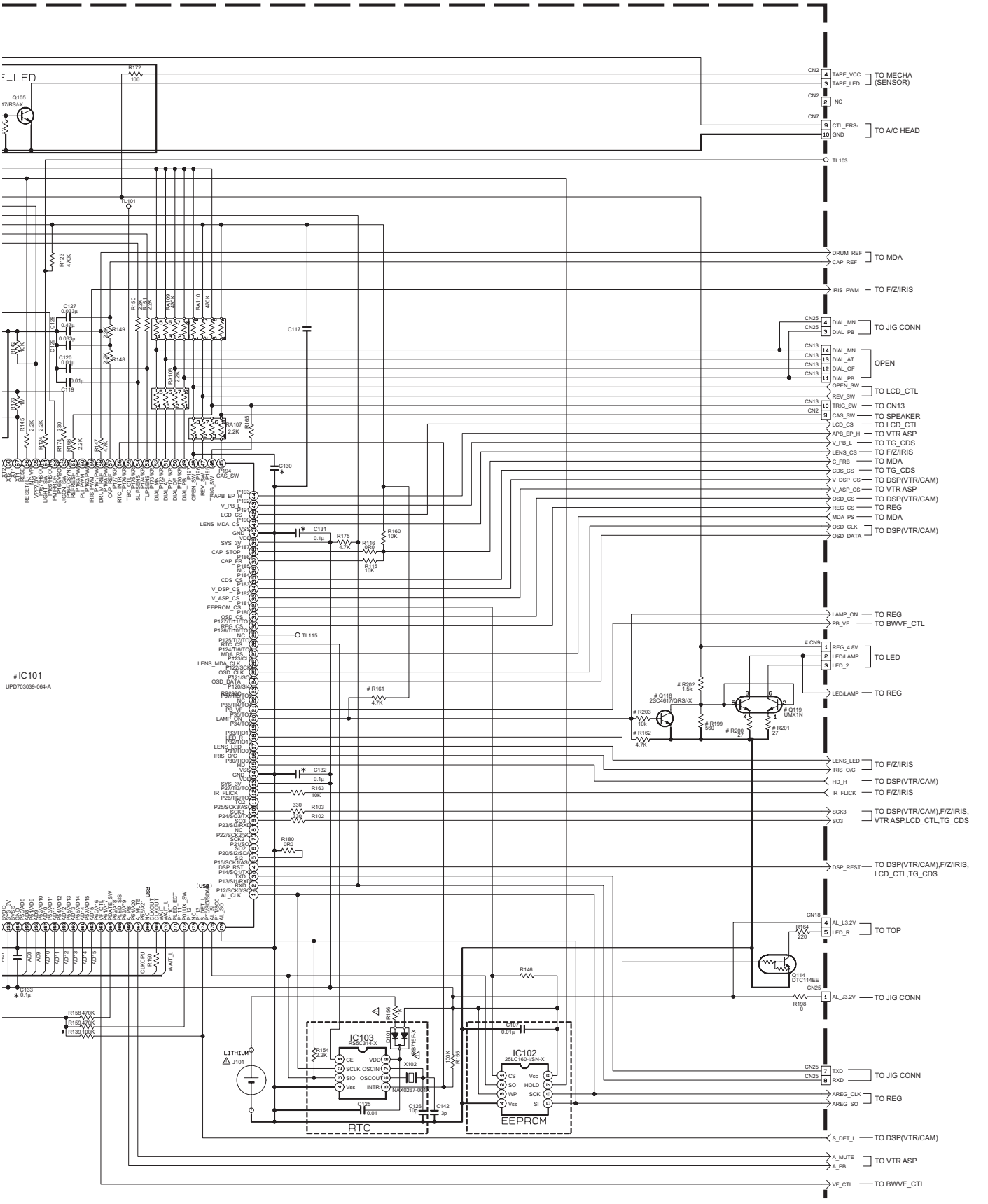
NOTE: The number of patch cords (*) are indicated by interconnected.


02 CCD
(Page2-26)
OP
JIG_CONN.
CN5301
CN22
CN25
CN15
YTU94074-14
YTU94077-14
YTU94074-24
YTU94077-24
TG_CDS
(Page2-17)
F/Z/IRIS
(Page2-13)
CPU
(Page2-5)
IR_UNIT
ZOOM
UNIT
(Page2-30)
CN13
MDA
(Page2-7)
01 MAIN
CN18
CN401
04 TOP
(Page2-27)
yf126_y10488001a_rev0.1
YTU94074-6
YTU94077-6
YTU94074-18
YTU94077-18
MECHA
CAPSTAN
MOTOR
SENSOR
(Page2-30)

■ MAIN(CPU) SCHEMATIC DIAGRAM



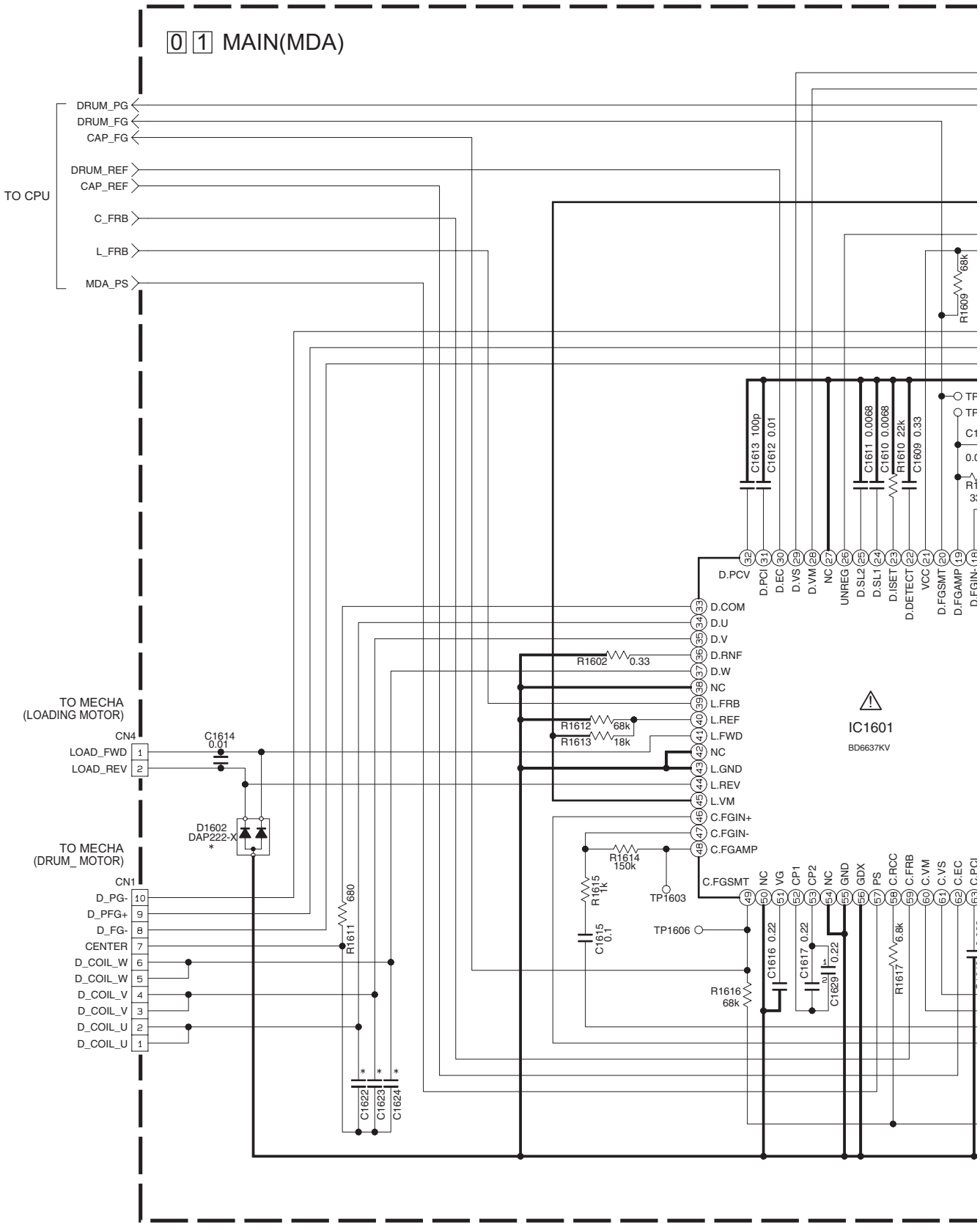
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.



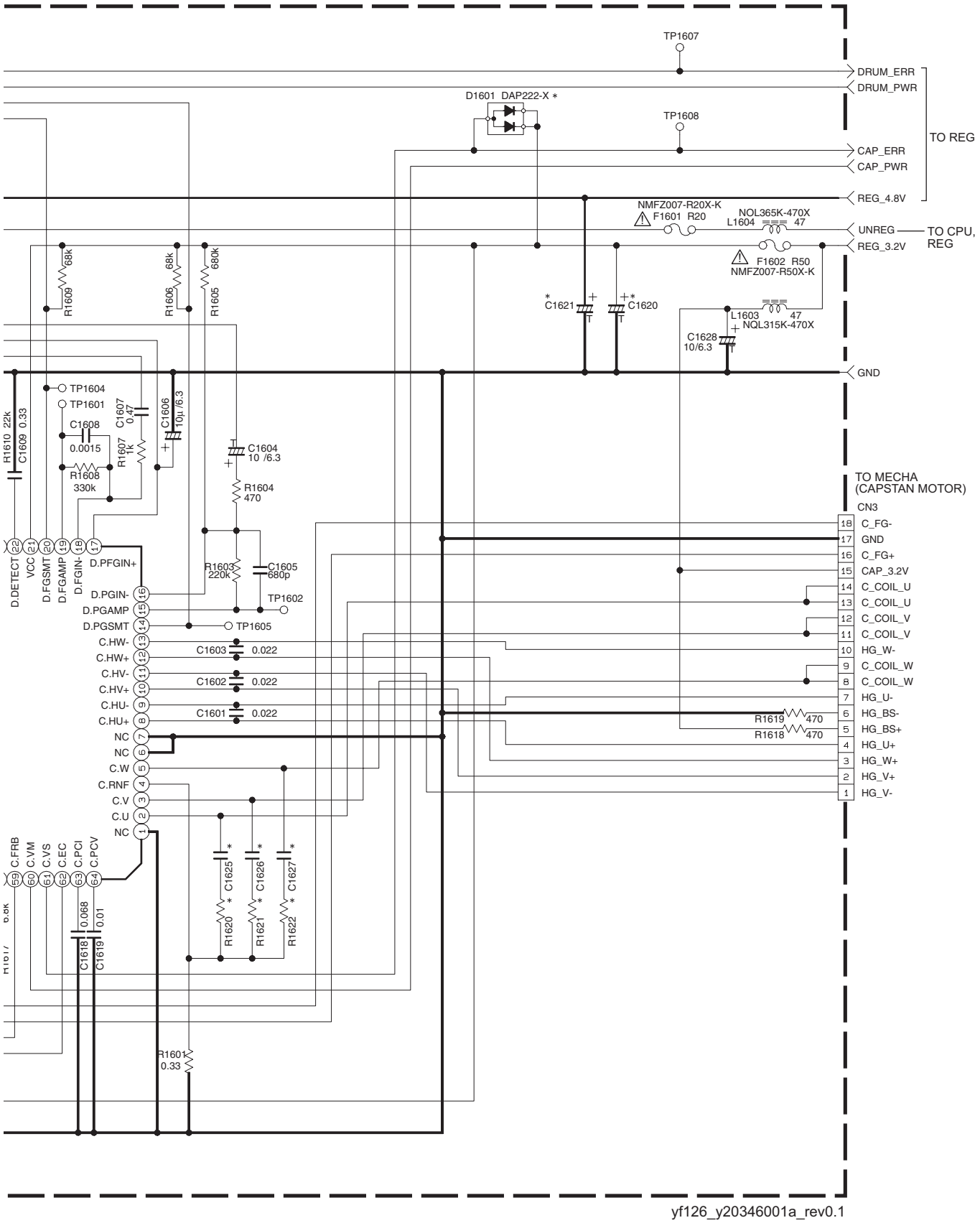
ONS".

yf126_y10489001a_rev1.1

■ MAIN(MDA) SCHEMATIC DIAGRAM



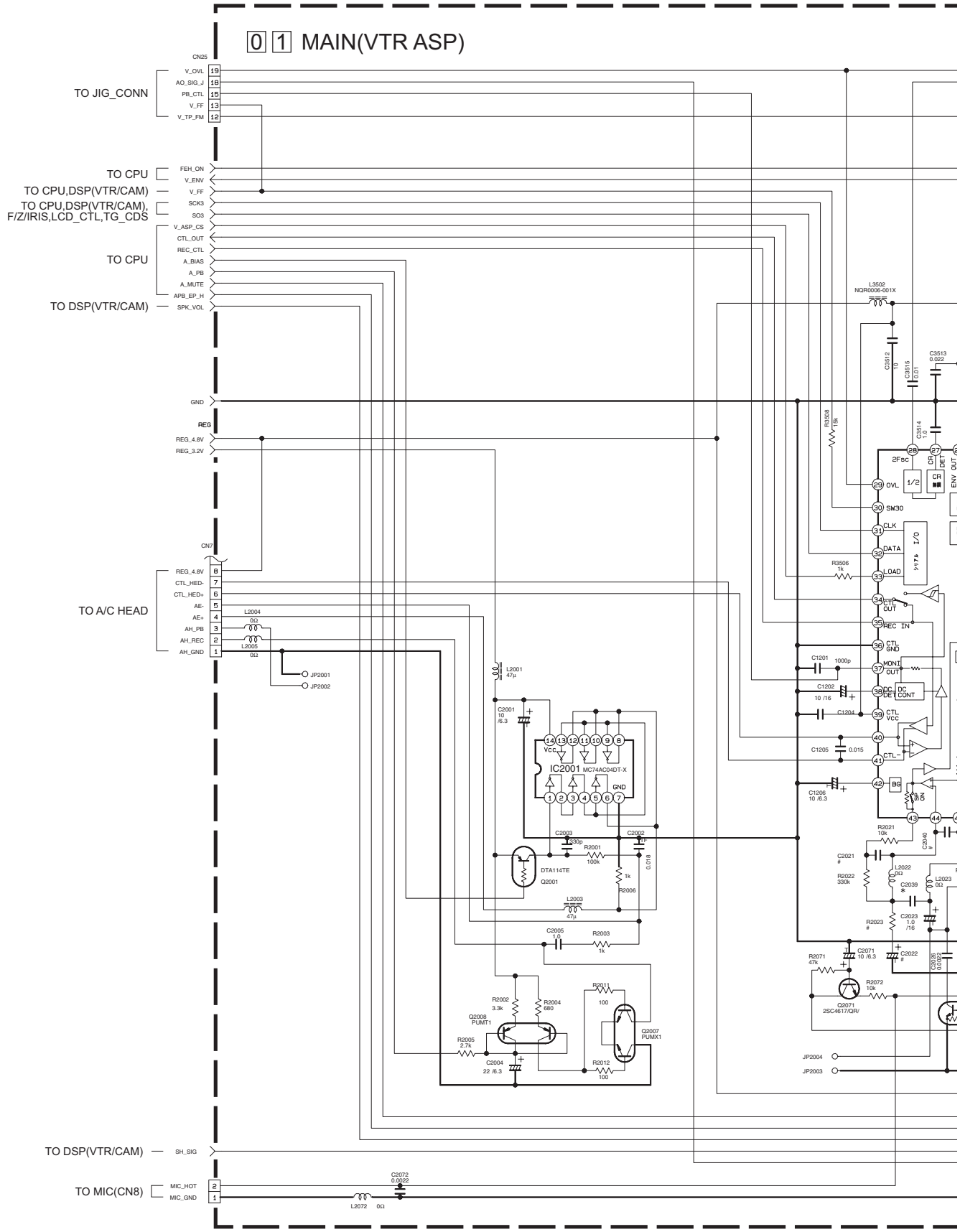
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.



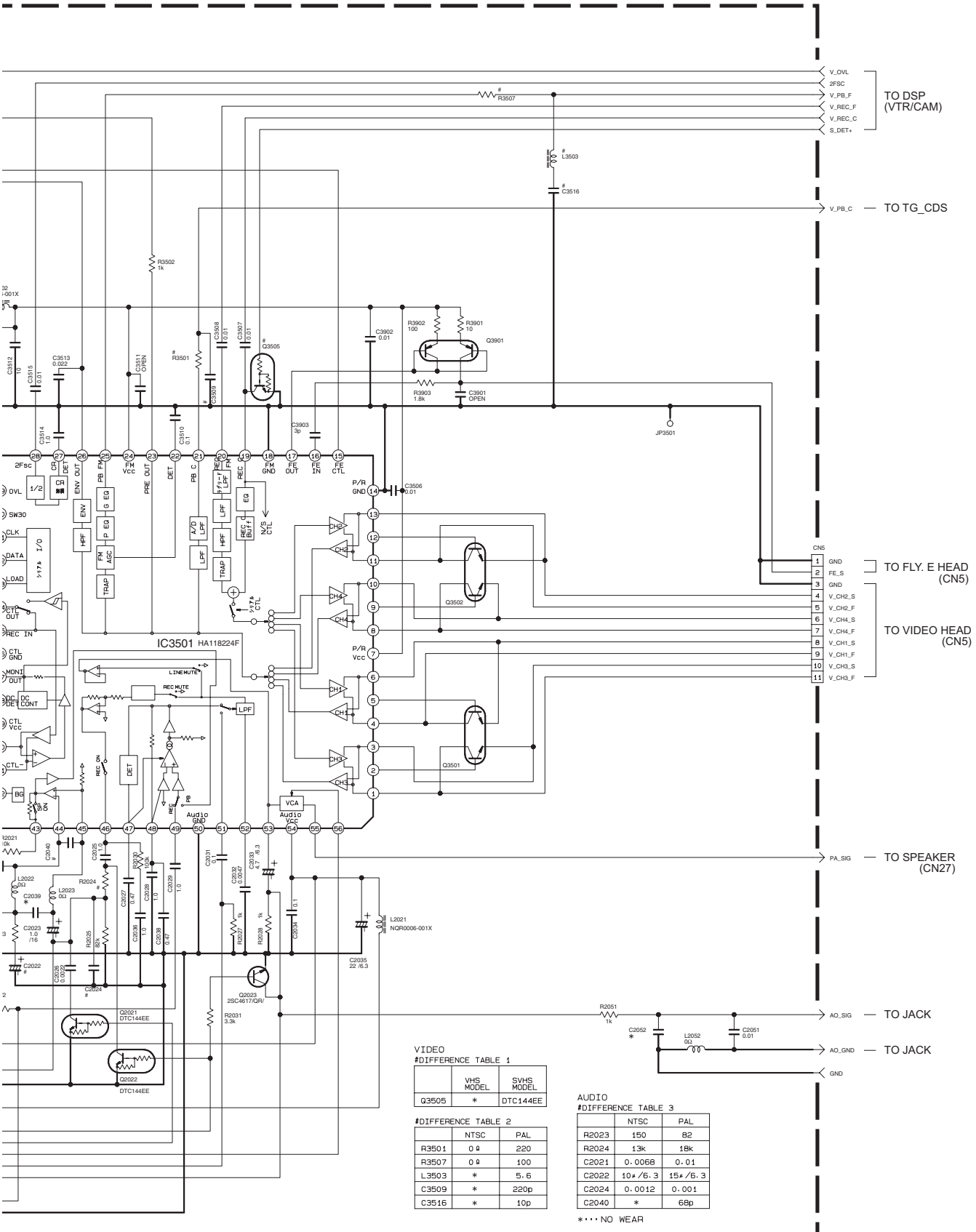
yf126_y20346001a_rev0.1

ONS".

■ MAIN(VTR ASP) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.



VIDEO
#DIFFERENCE TABLE 1

	VHS MODEL	SVHS MODEL
Q3505	*	DTC144EE

#DIFFERENCE TABLE 2

	NTSC	PAL
R3501	0Ω	220
R3507	0Ω	100
L3503	*	5.6
C3509	*	220p
C3516	*	10p

AUDIO
#DIFFERENCE TABLE 3

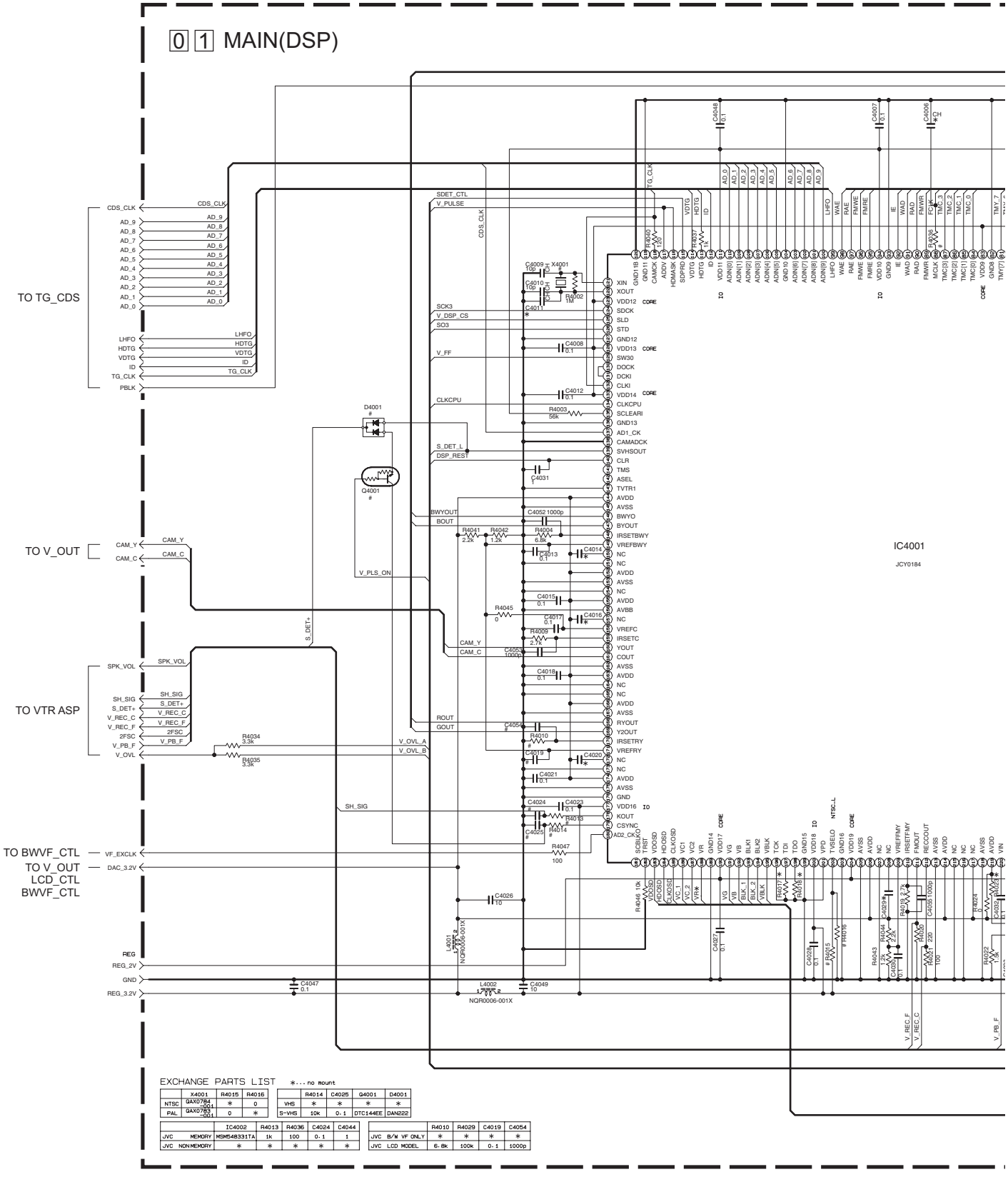
	NTSC	PAL
R2023	150	82
R2024	13k	18k
C2021	0.0068	0.01
C2022	10μ/6.3	15μ/6.3
C2024	0.0012	0.001
C2040	*	68p

*・・・NO WEAR

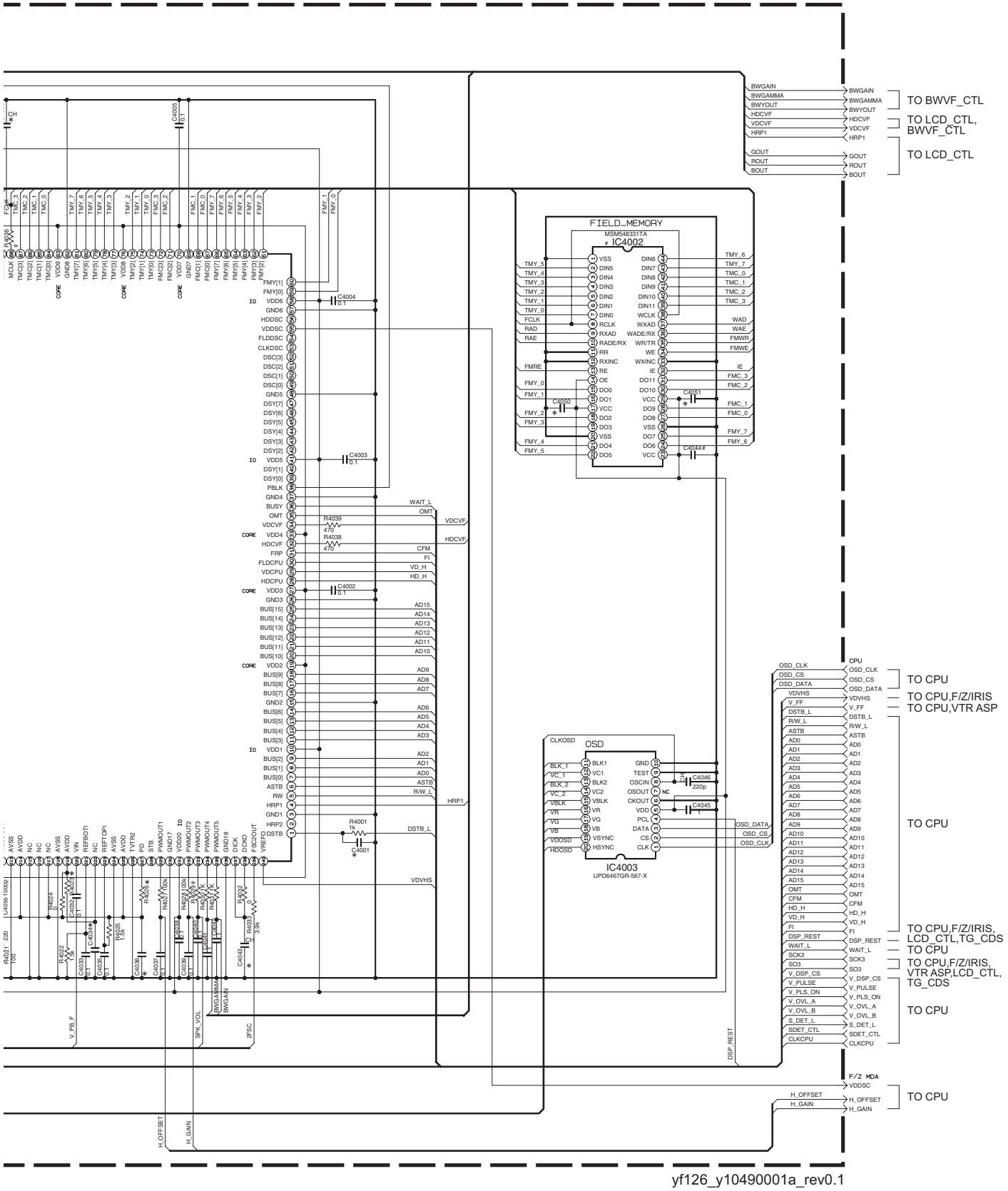
yf126_y20348001a_rev0.1

ONS".

■ MAIN(DSP) SCHEMATIC DIAGRAM

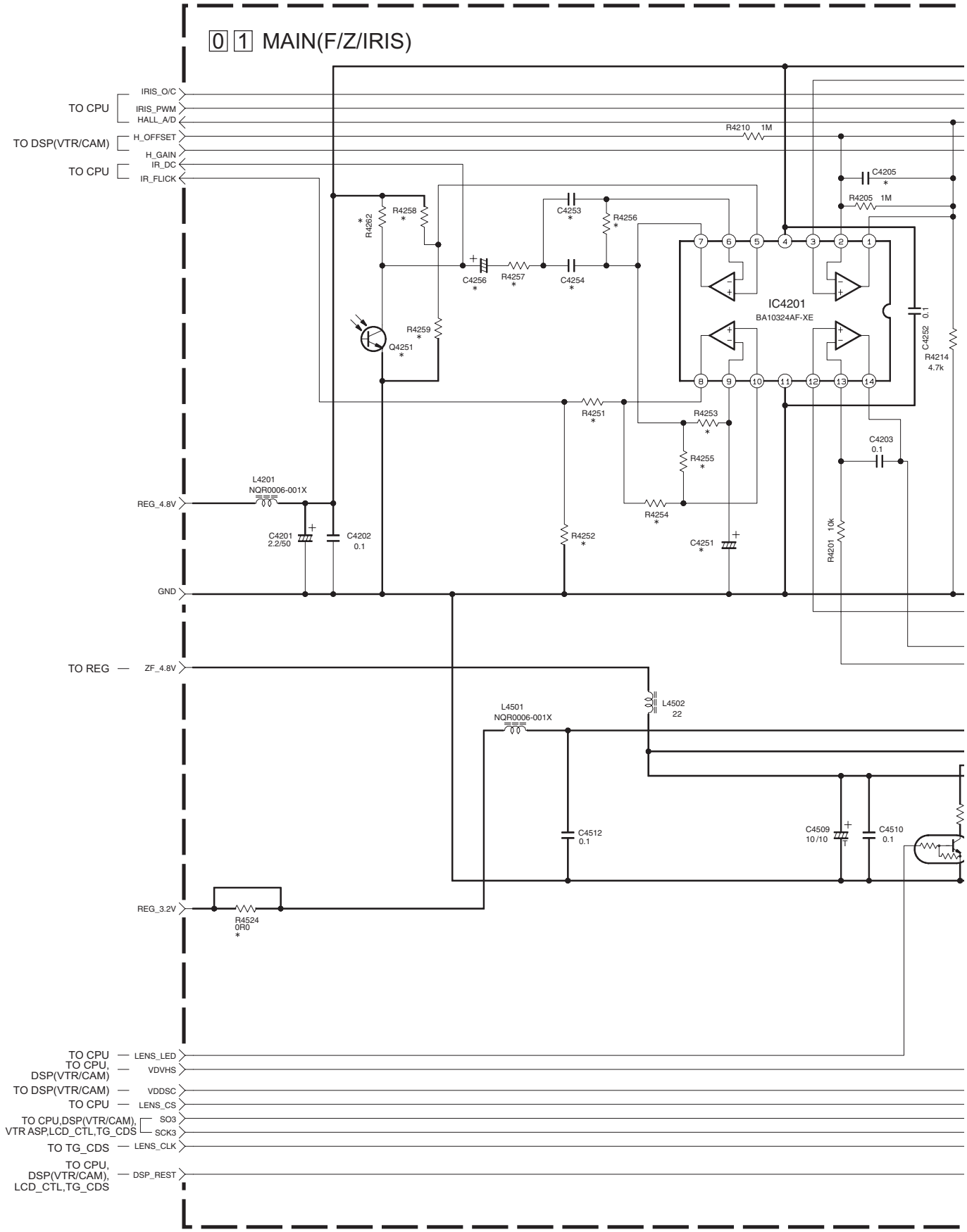


NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

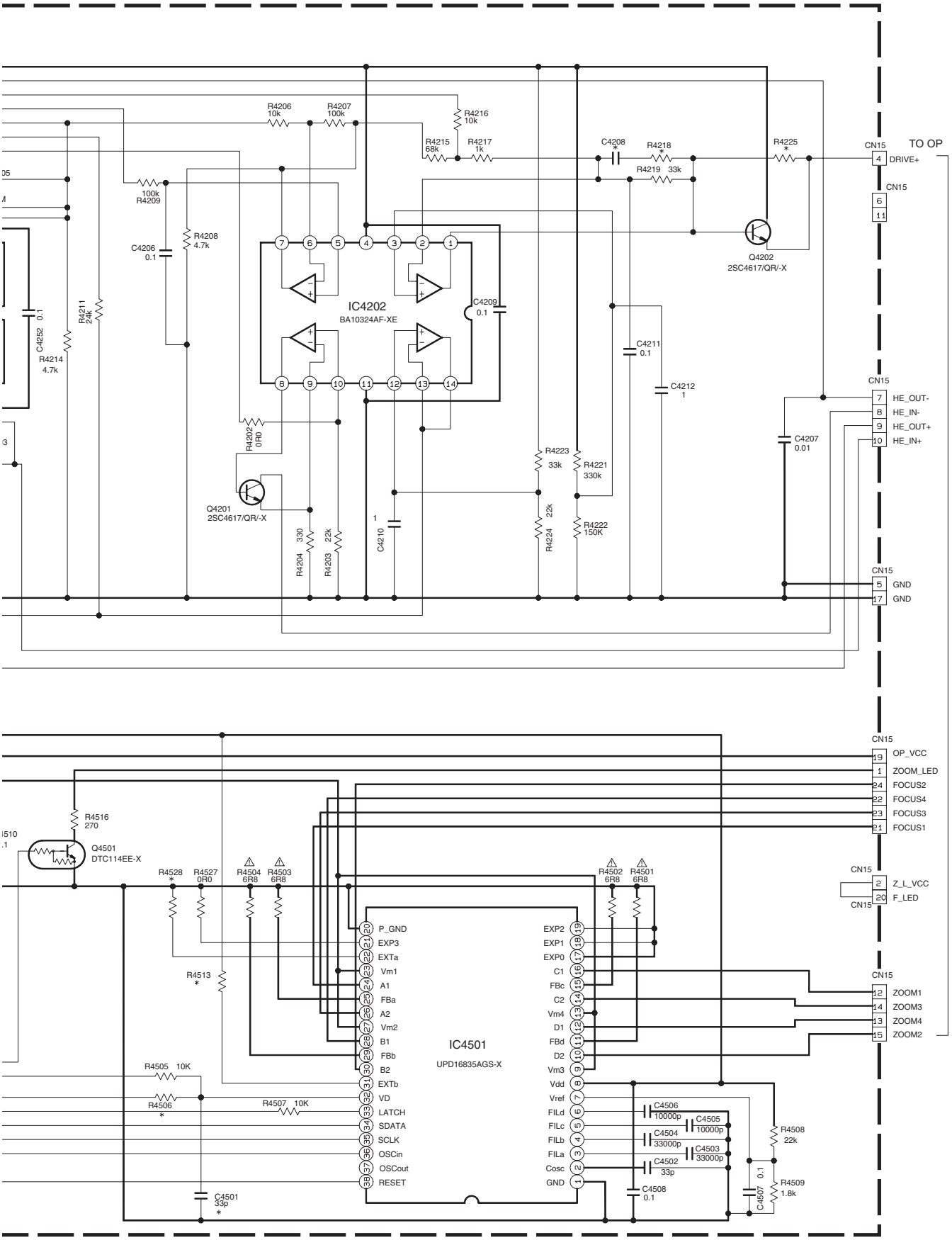

FIELD_MEMORY
MSM548331TA
IC4002
IC4003
UPD6467GR-567-X
OSD
TO BWVF_CTL
TO LCD_CTL, BWVF_CTL
TO LCD_CTL
TO CPU
TO CPU,F/Z/IRIS
TO CPU,VTR ASP
TO CPU,F/Z/IRIS, LCD_CTL,TG_CDS
TO CPU,F/Z/IRIS, VTR ASP,LCD_CTL, TG_CDS
F/Z MDA
yf126_y10490001a_rev0.1

ONS".

■ MAIN(F/Z/IRIS) SCHEMATIC DIAGRAM



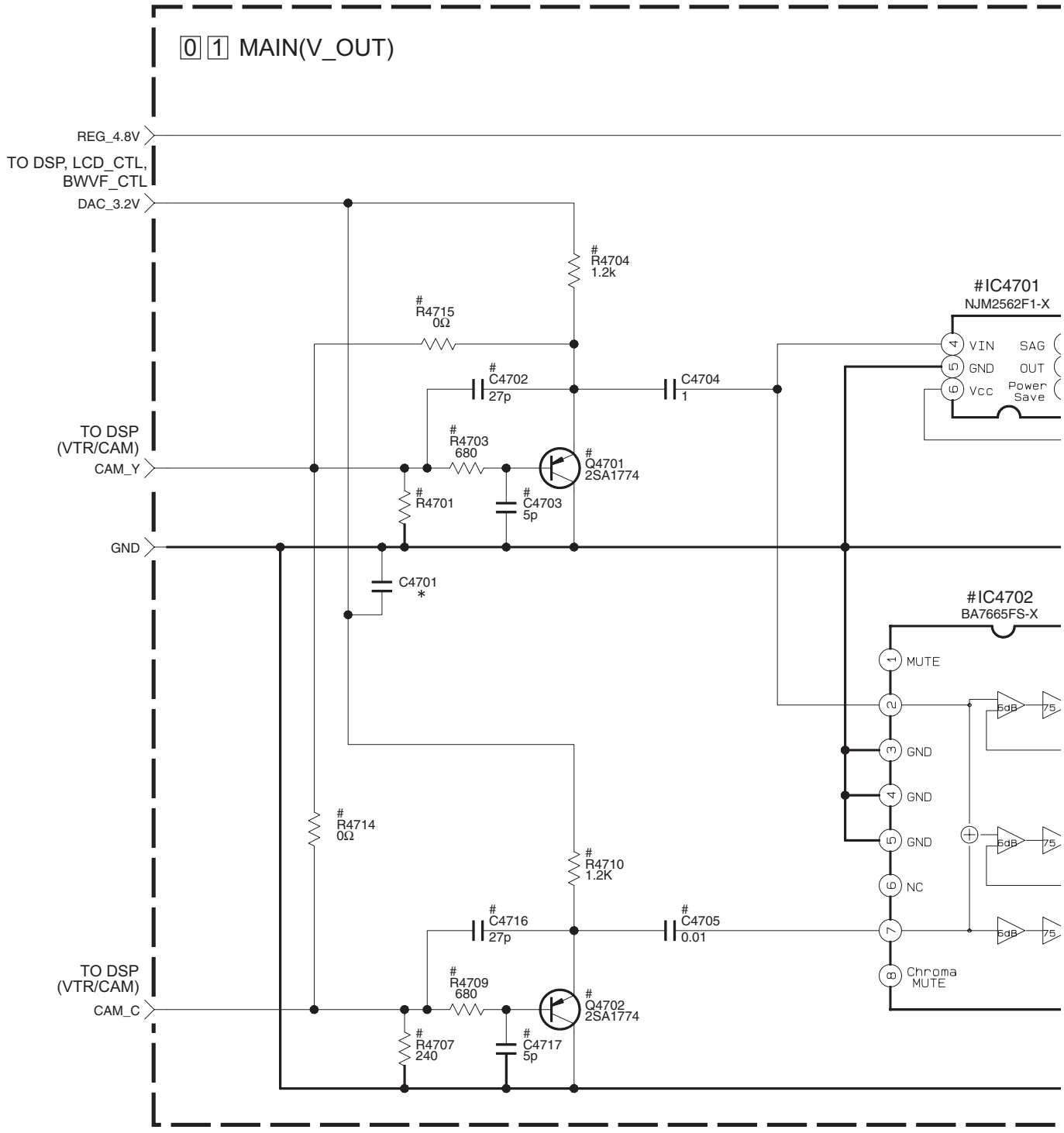
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.



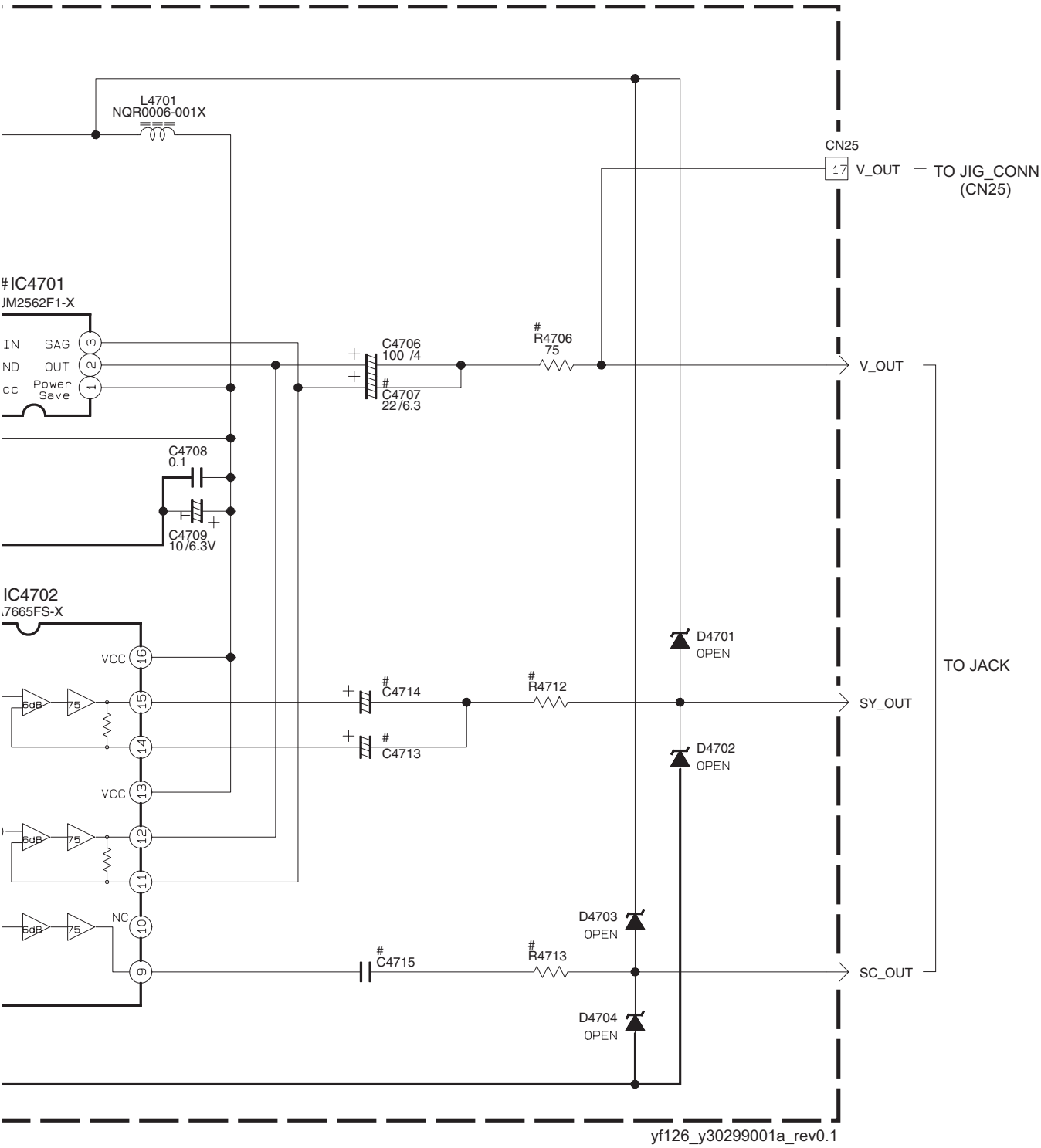
ONS".

yf126_y20347001a_rev0.1

■ MAIN(V_OUT) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.



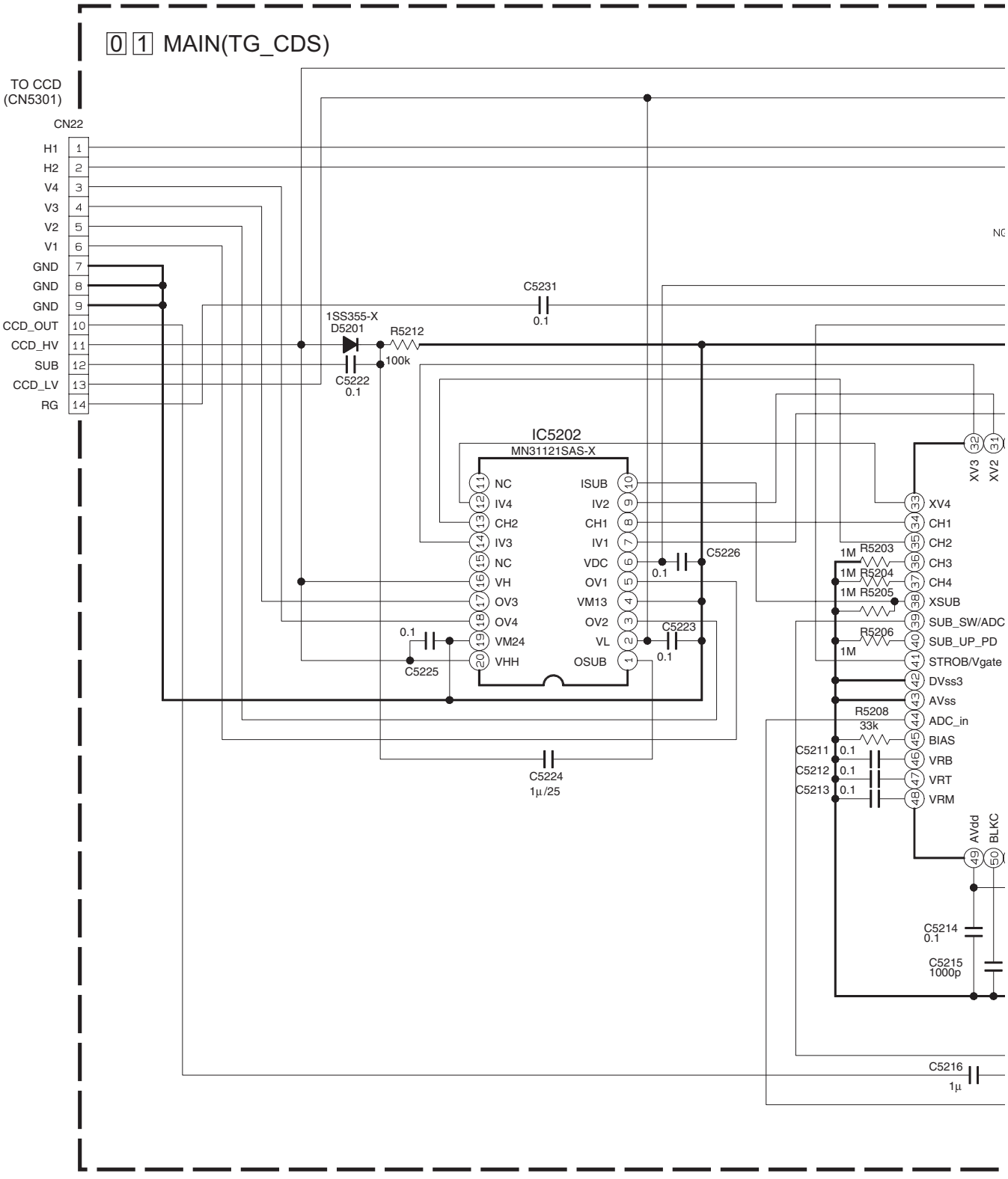
EXCHANGE PARTS LIST *...no mount

	IC4701	IC4702	Q4701, Q4702	R4701	R4703, R4709	R4707	R4710	R4712
VHS MODEL	NJM2562F1	*	*	130	*	*	*	*
SVHS MODEL	*	BA7665FS	2SA1774	240	680	240	1.2k	75

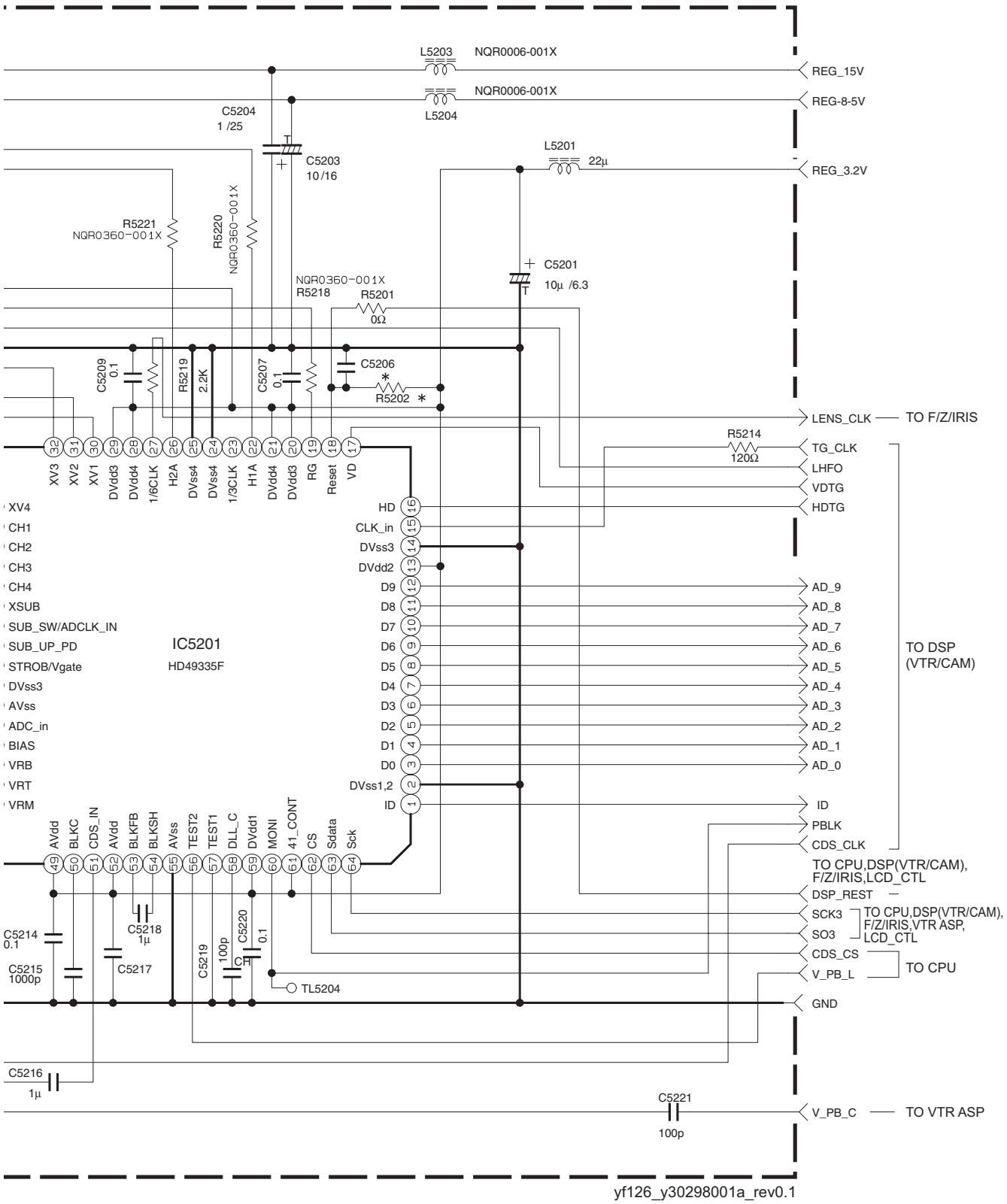
	R4713	R4714, R4715	C4702, C4716	C4703, C4717	C4705	C4707	C4713	C4714	C4715
VHS MODEL	*	0	*	*	*	33u/10	*	*	*
SVHS MODEL	75	*	27p	5p	0.01	22u/6.3	22u/6.3	100u/4	0.01

ONS".

■ MAIN(TG_CDS) SCHEMATIC DIAGRAM

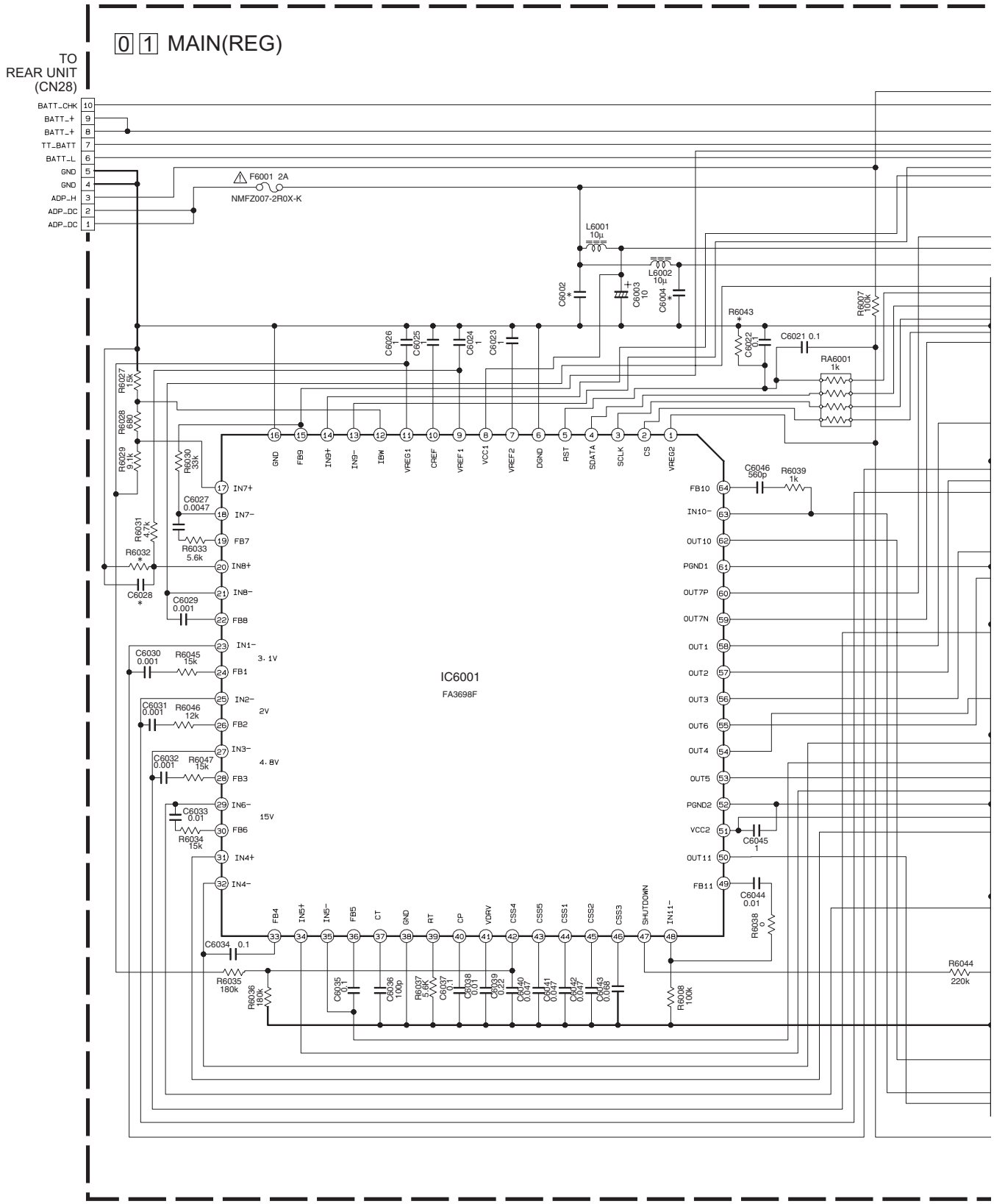


NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

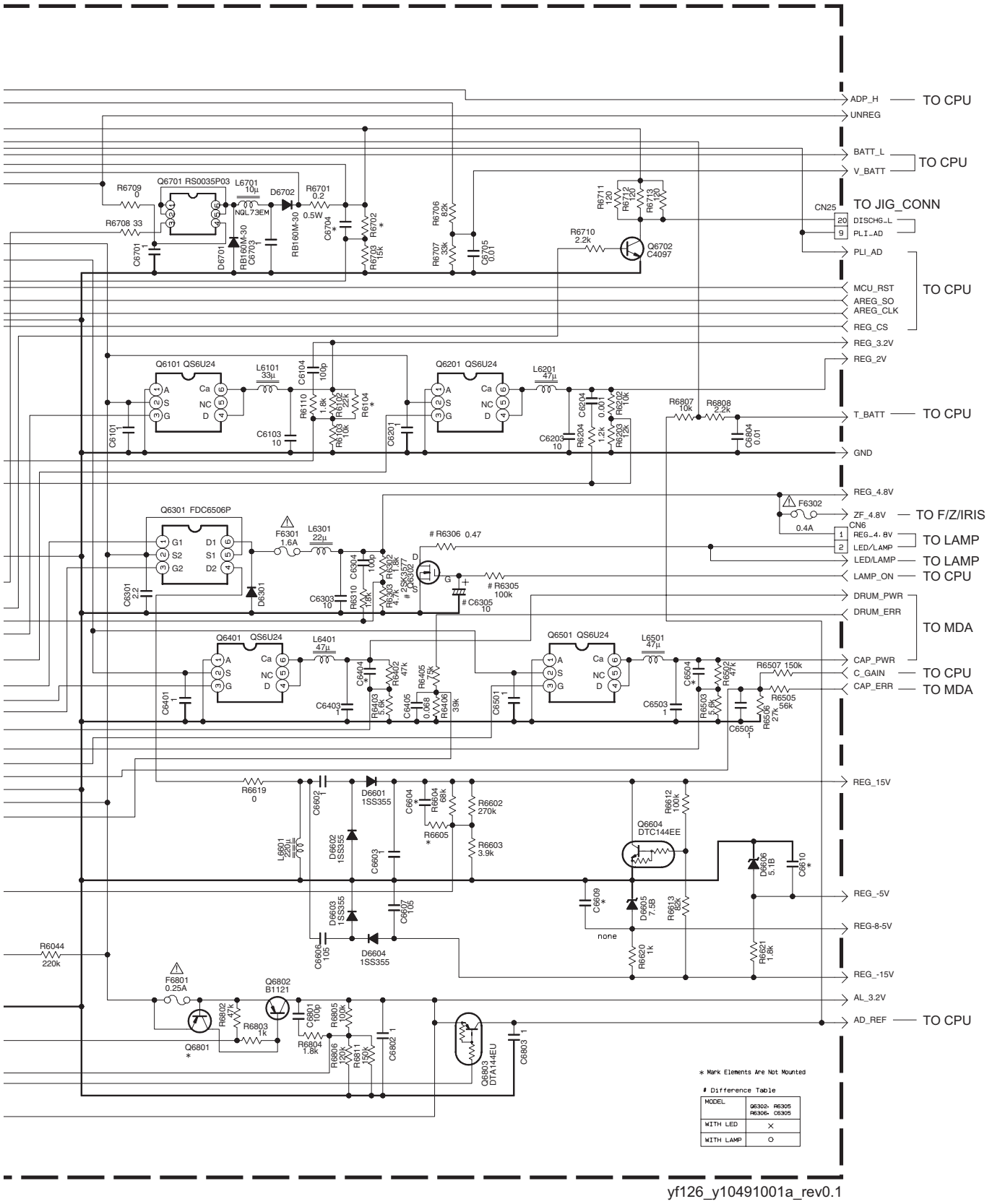

L5203 NQR0006-001X
REG_15V
NQR0006-001X
L5204
REG-8-5V
C5204
1 /25
C5203
10/16
L5201
22µ
REG_3.2V
R5221
NQR0360-001X
R5220
NQR0360-001X
C5201
10µ /6.3
NQR0360-001X
R5218
R5201
0Ω
C5209
0.1
R5219
2.2K
C5207
0.1
C5206
R5202
LENS_CLK
TO F/Z/IRIS
R5214
120Ω
TG_CLK
LHFO
VDTG
HDTG
XV3 XV2 XV1 DVdd3 DVdd4 1/6CLK H2A DVss4 DVss4 1/3CLK H1A DVdd4 DVdd3 RG Reset VD
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
XV4
CH1
CH2
CH3
CH4
XSUB
SUB_SW/ADCLK_IN
SUB_UP_PD
STROB/Vgate
DVss3
AVss
ADC_in
BIAS
VRB
VRT
VRM
IC5201
HD49335F
HD 16
CLK_in 15
DVss3 14
DVdd2 13
D9 12
D8 11
D7 10
D6 9
D5 8
D4 7
D3 6
D2 5
D1 4
D0 3
DVss1,2 2
ID 1
AD_9
AD_8
AD_7
AD_6
AD_5
AD_4
AD_3
AD_2
AD_1
AD_0
TO DSP
(VTR/CAM)
ID
PBLK
CDS_CLK
AVdd BLKC CDS_IN AVdd BLKFB BLKSH AVss TEST2 TEST1 DLL_C DVdd1 MONI 41_CONT CS Sdata Sck
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
TO CPU,DSP(VTR/CAM),
F/Z/IRIS,LCD_CTL
DSP_REST
SCK3
SO3
TO CPU,DSP(VTR/CAM),
F/Z/IRIS,VTR ASP,
LCD_CTL
CDS_CS
V_PB_L
TO CPU
C5214
0.1
C5215
1000p
C5218
1µ
C5217
C5219
100p
C5220
0.1
TL5204
GND
C5216
1µ
C5221
100p
V_PB_C
TO VTR ASP
yf126_y30298001a_rev0.1

ONS".

■ MAIN(REG) SCHEMATIC DIAGRAM



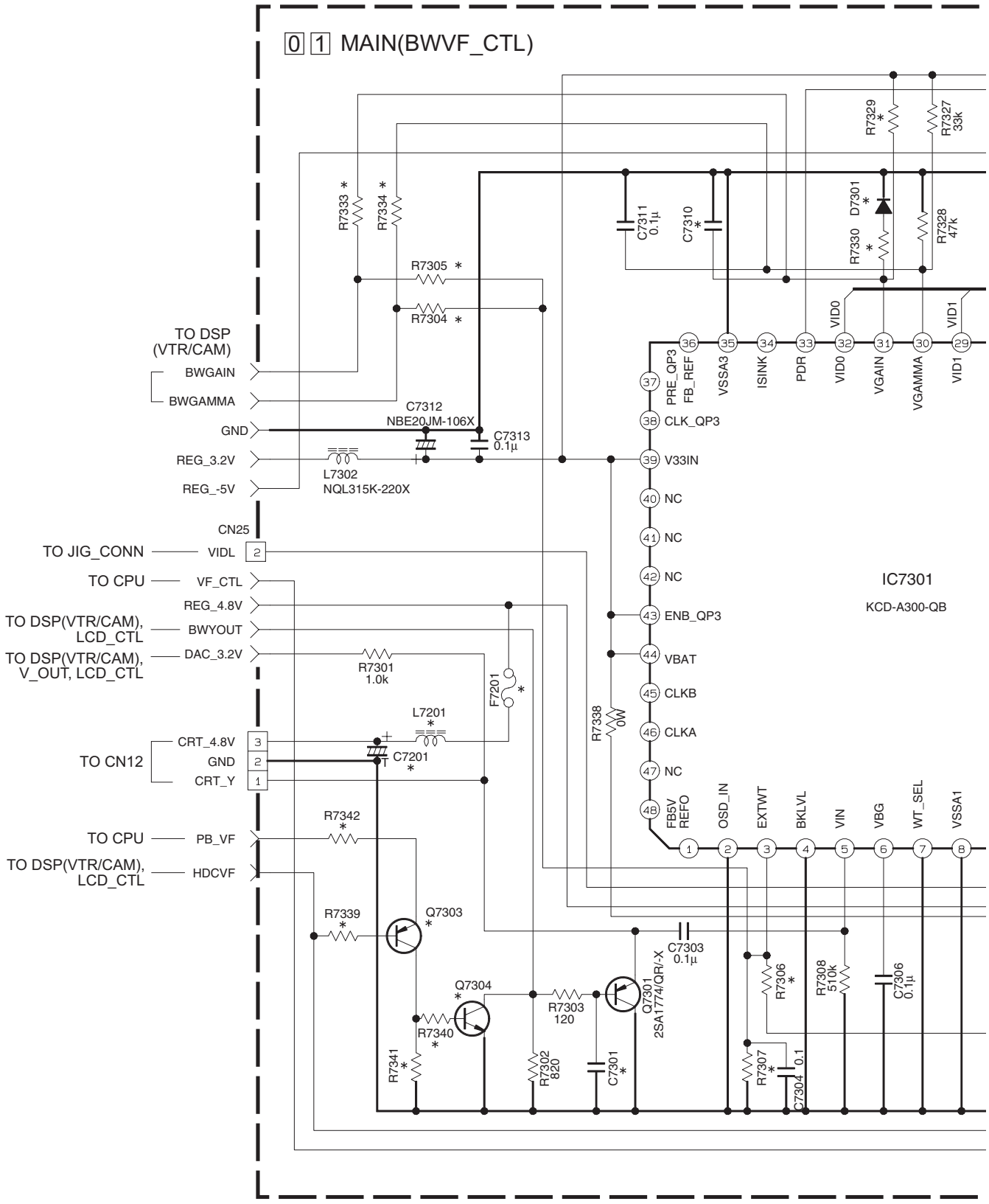
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.



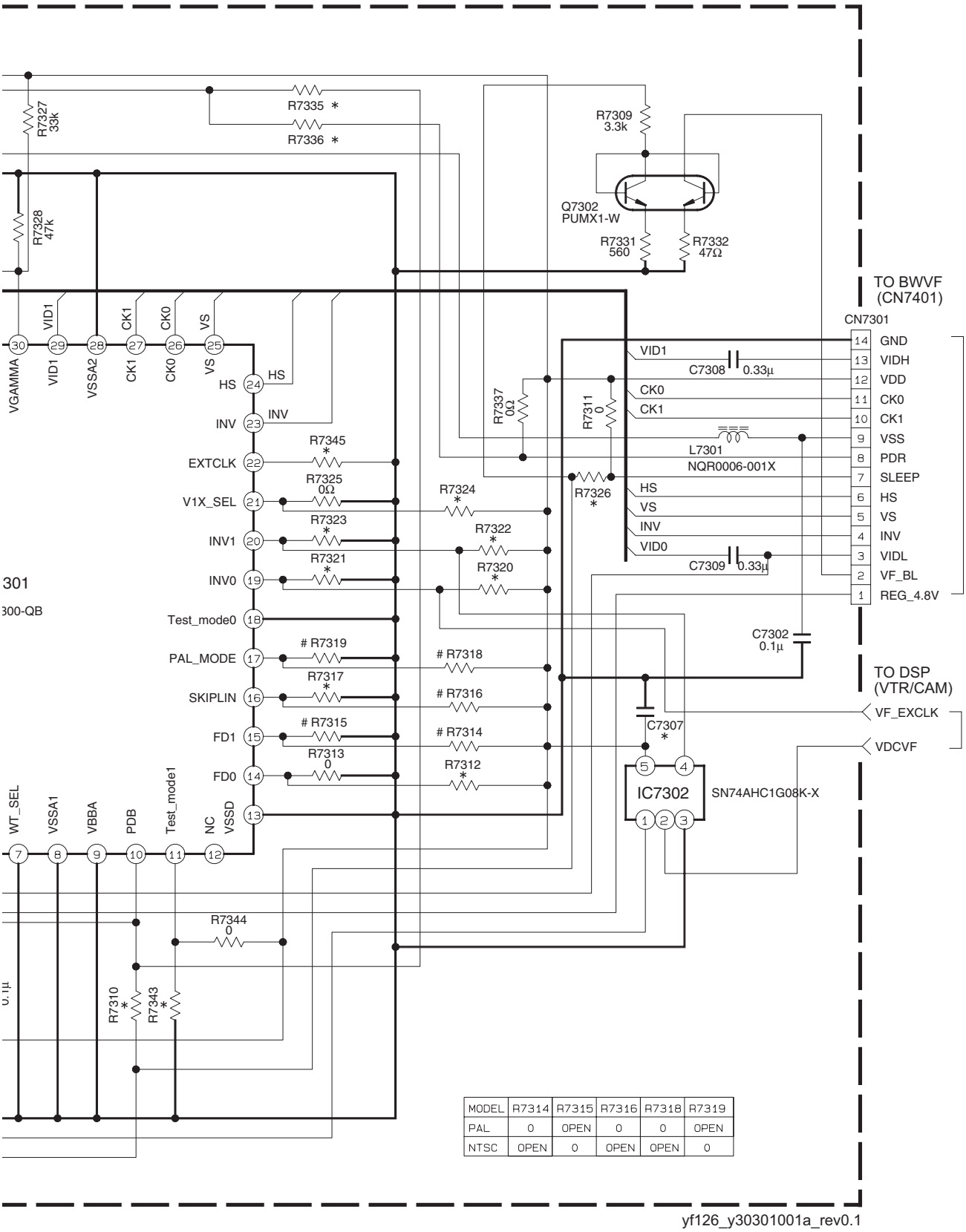
yf126_y10491001a_rev0.1

ONS".

■ MAIN(BWVF_CTL) SCHEMATIC DIAGRAM



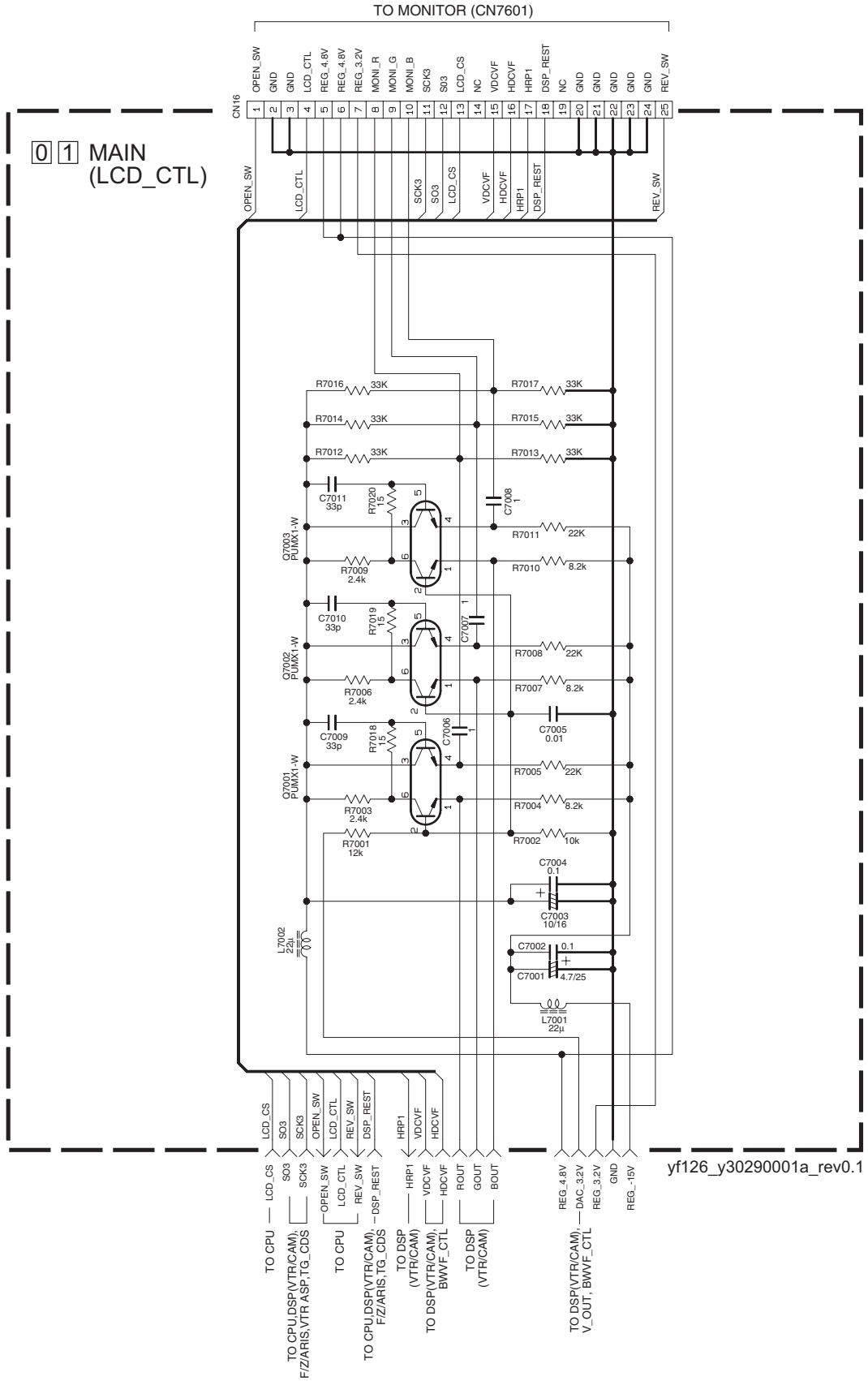
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.



MODEL	R7314	R7315	R7316	R7318	R7319
PAL	0	OPEN	0	0	OPEN
NTSC	OPEN	0	OPEN	OPEN	0

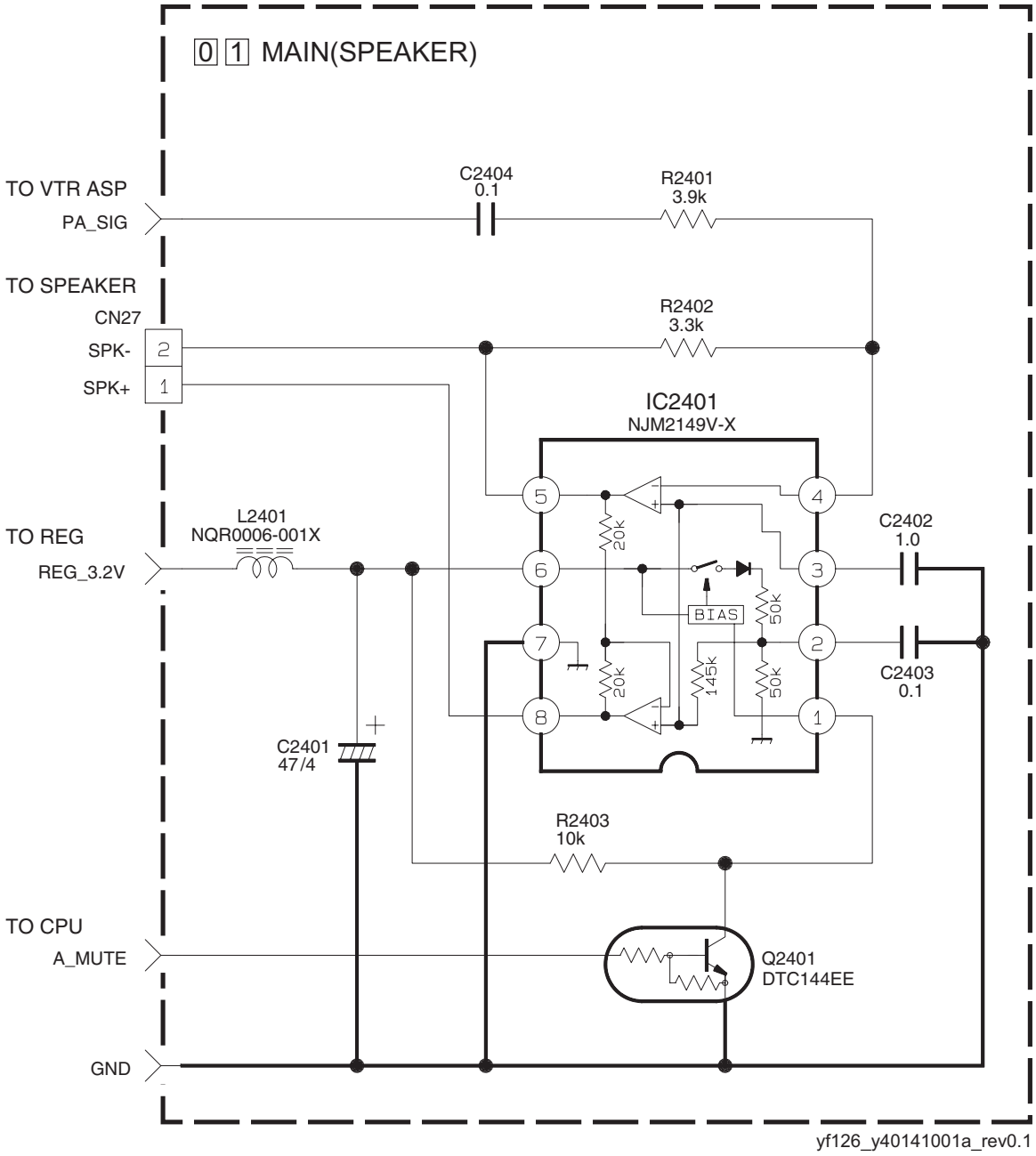
ONS".

■ MAIN(LCD_CTL) SCHEMATIC DIAGRAM



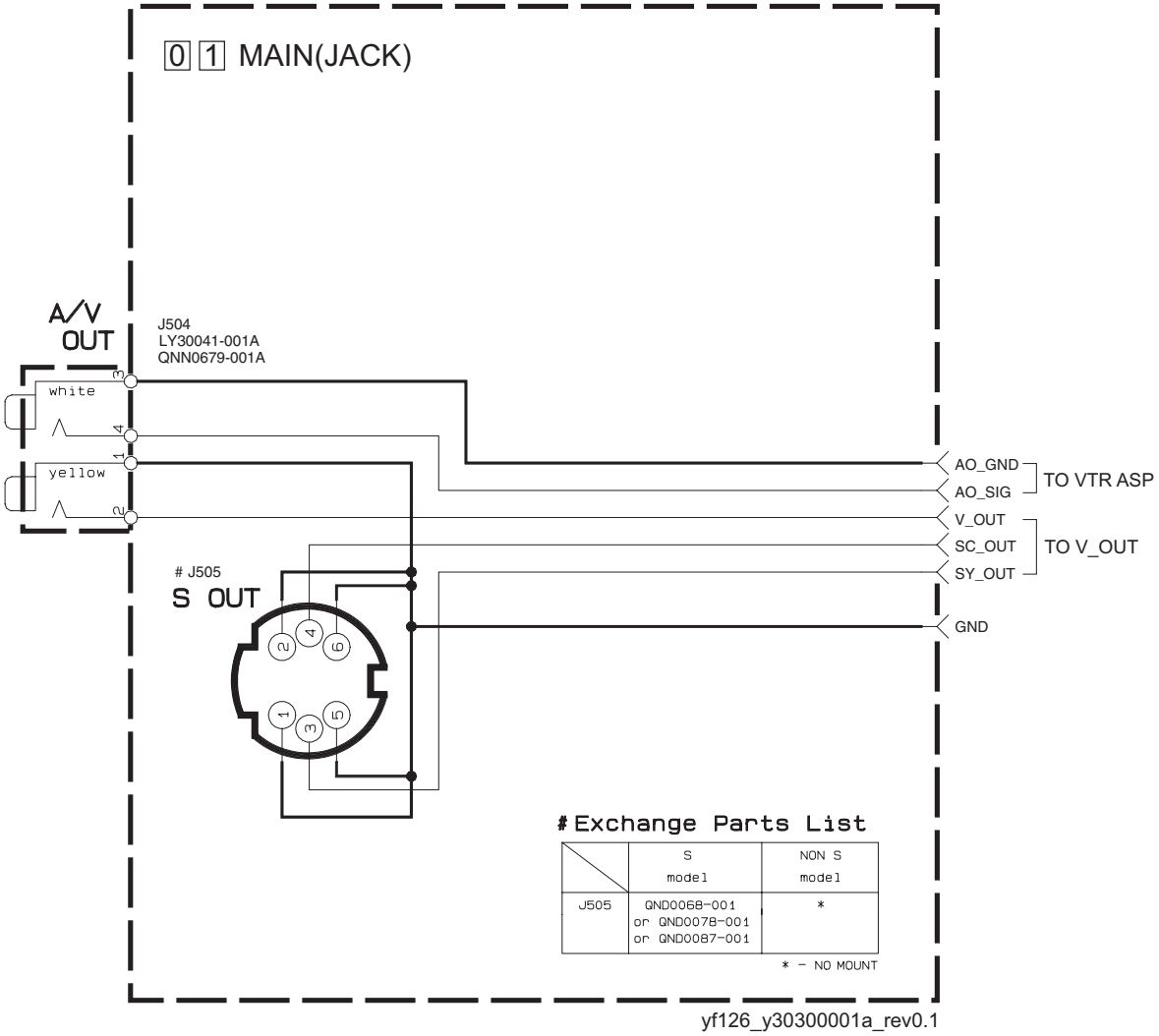
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN(SPEAKER) SCHEMATIC DIAGRAM



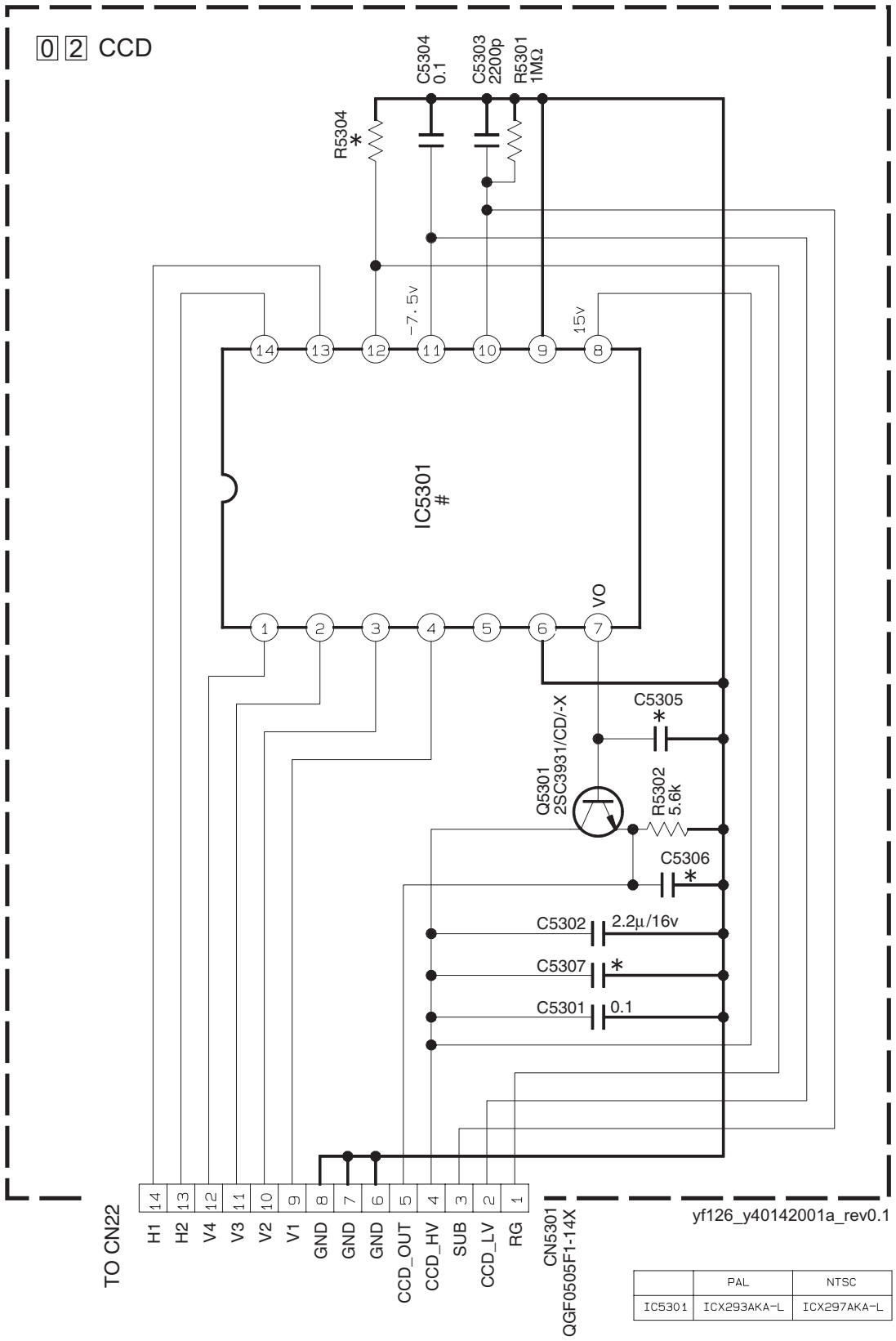
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ MAIN(JACK) SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ CCD SCHEMATIC DIAGRAM

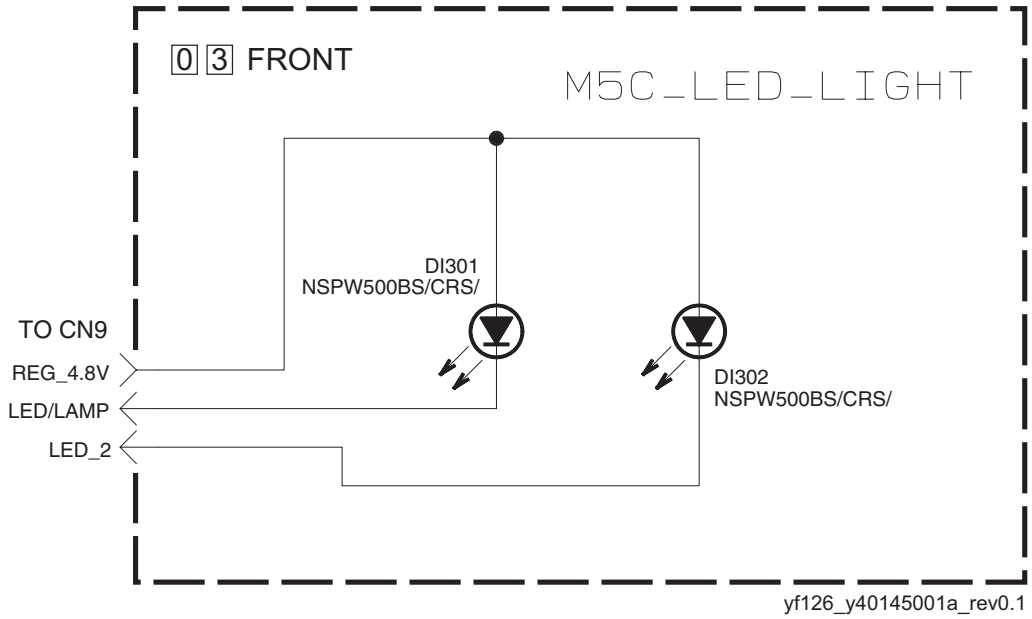


	PAL	NTSC
IC5301	ICX293AKA-L	ICX297AKA-L

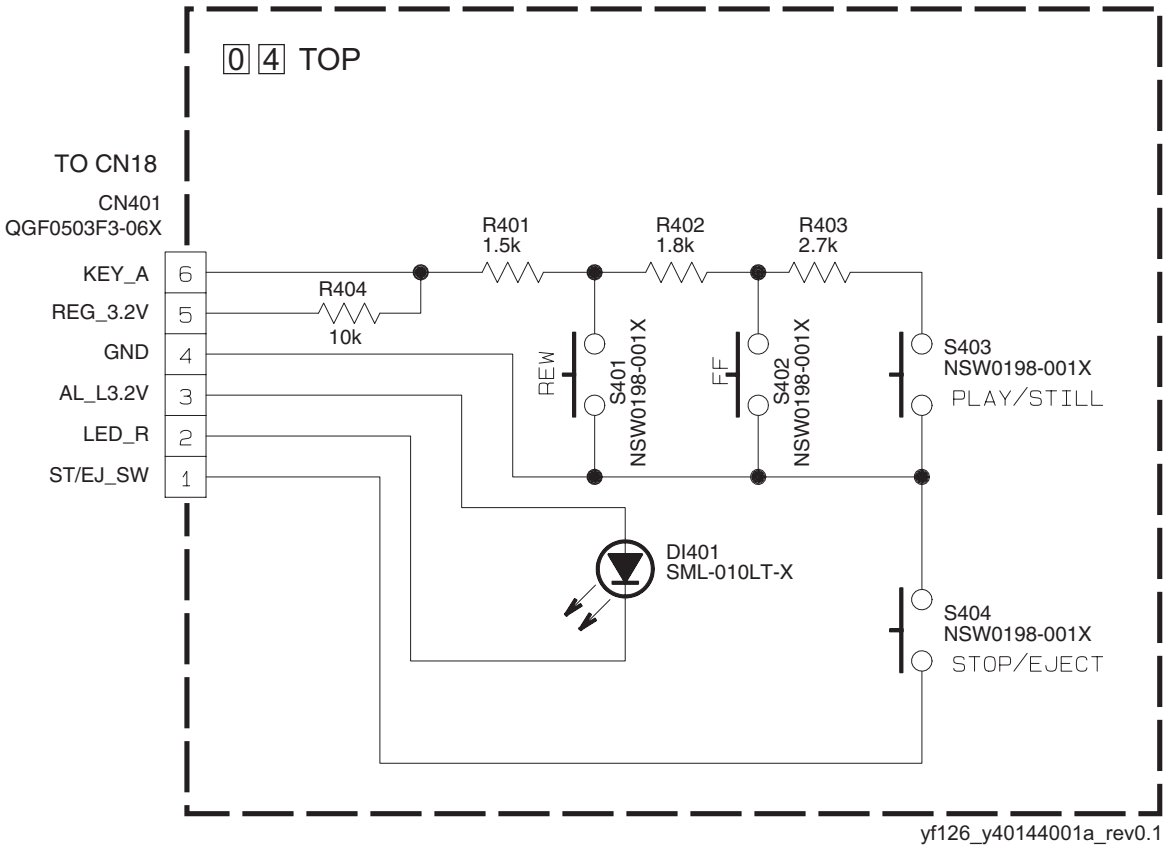
NOTES :1. For the destination of each signal and further line connectionsthat are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (*) is not used.
3. IC5301 is incorporated in the CCD base assembly .
When IC5301 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.

■ FRONT AND TOP SCHEMATIC DIAGRAMS

< with LED LIGHT MODEL >



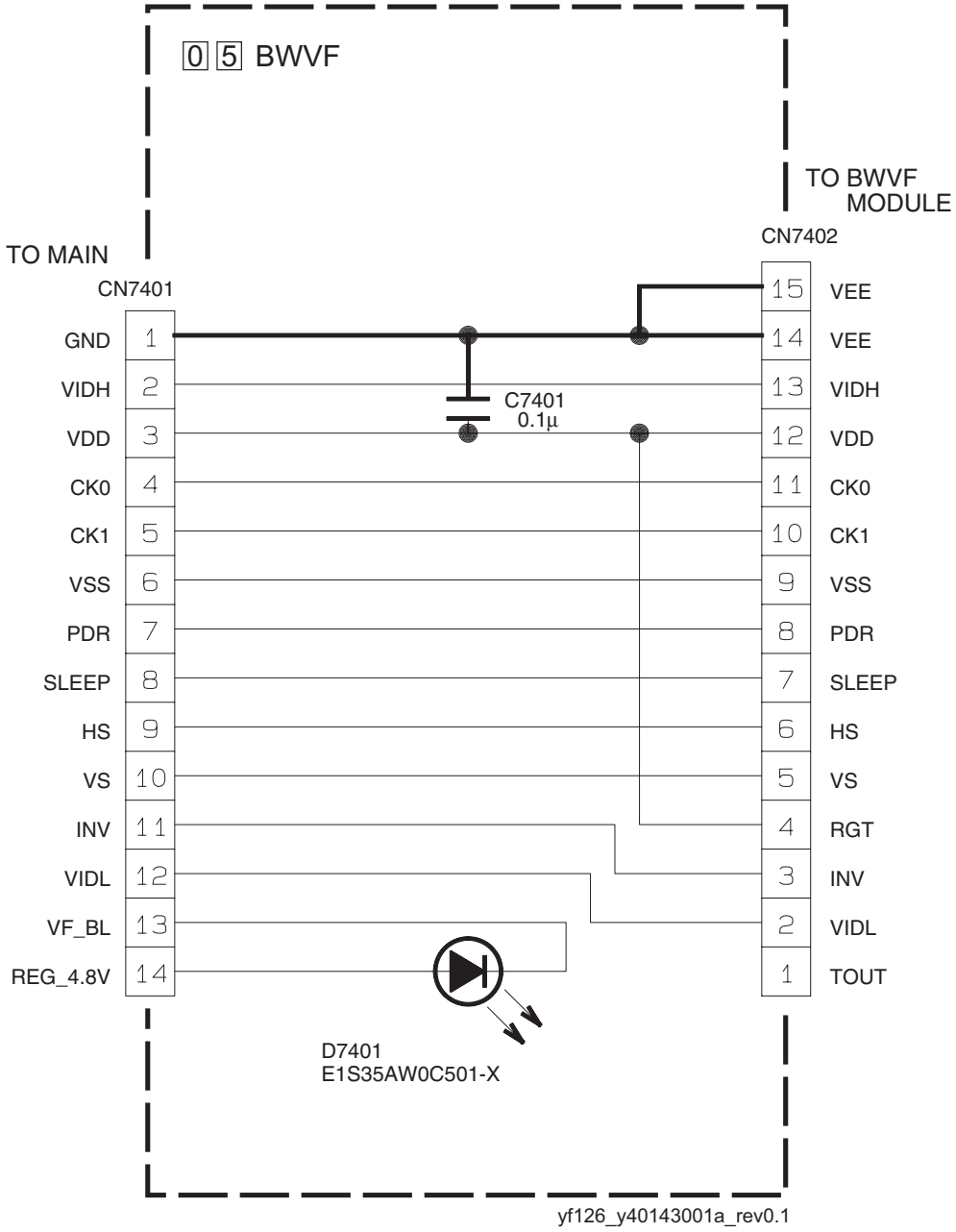
yf126_y40145001a_rev0.1



yf126_y40144001a_rev0.1

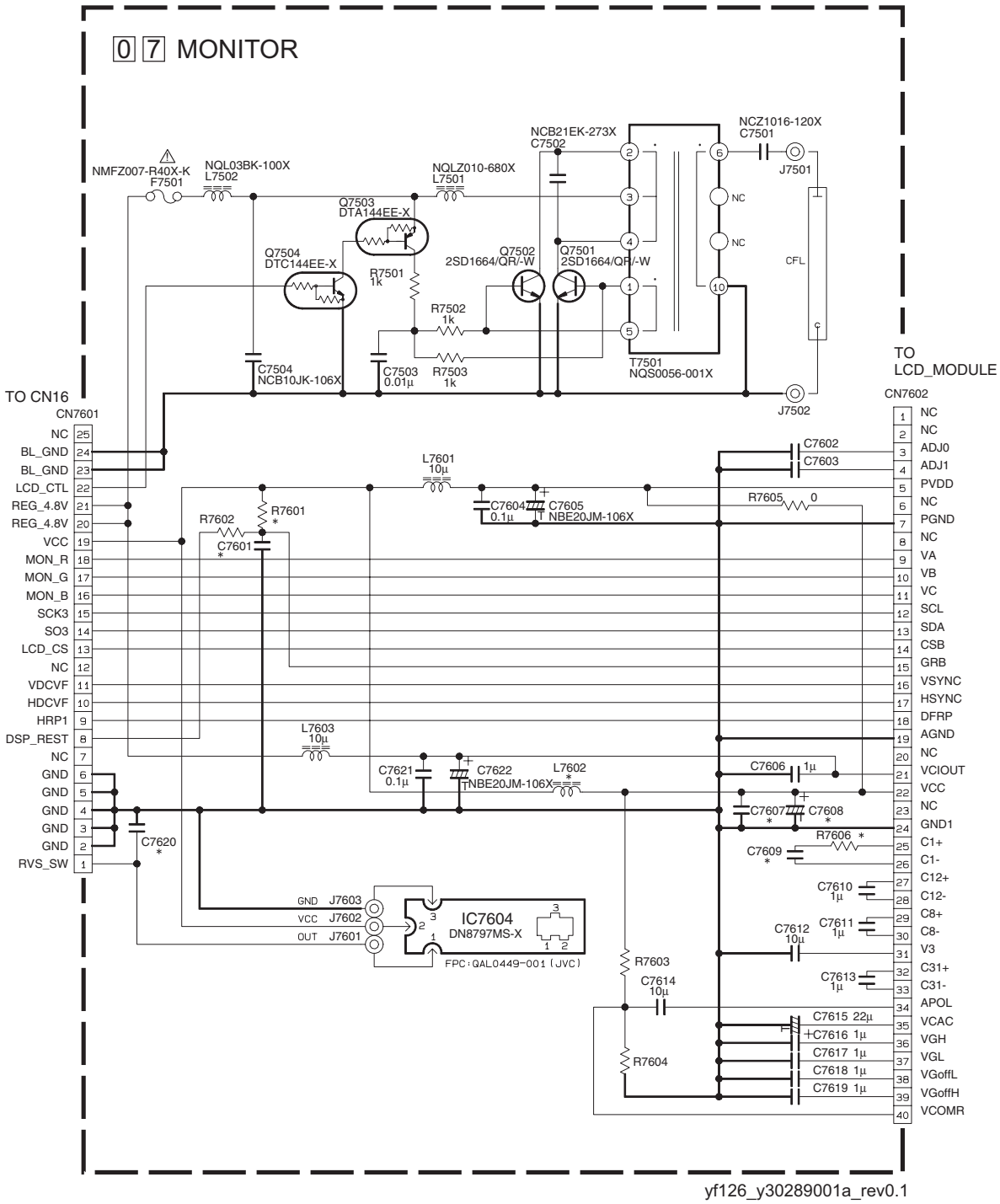
NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ BWVF SCHEMATIC DIAGRAM



NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

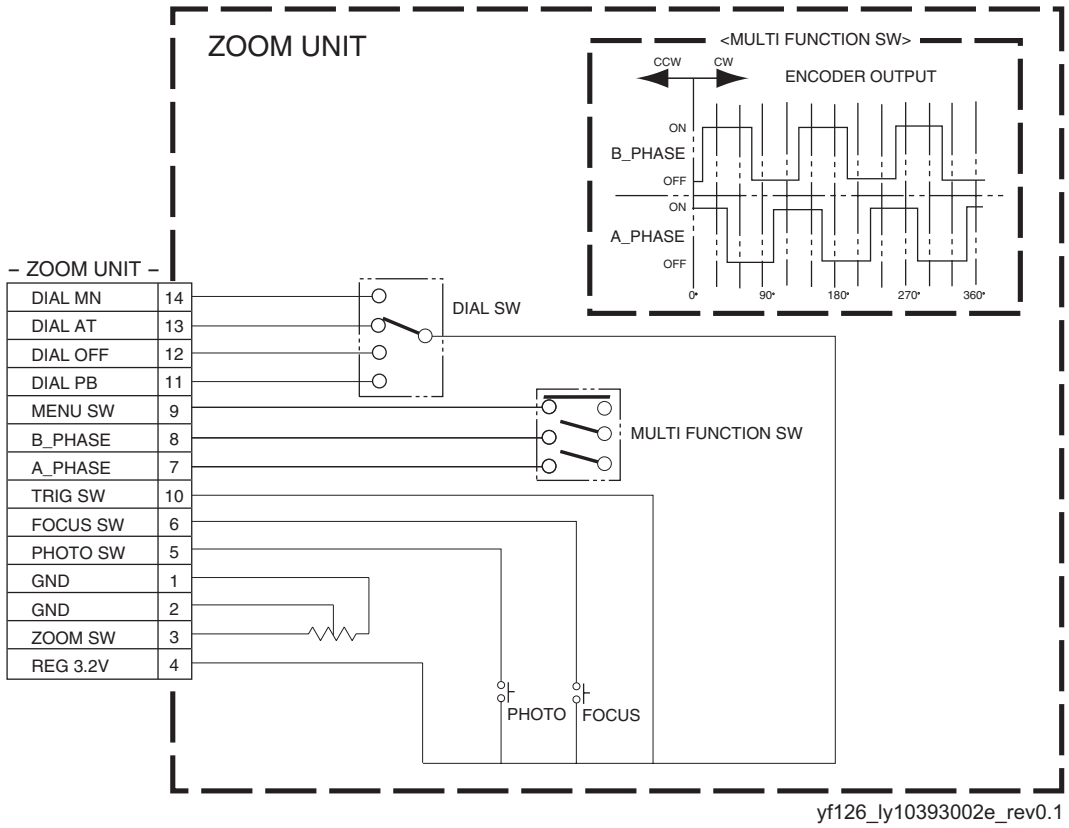
■ MONITOR SCHEMATIC DIAGRAM



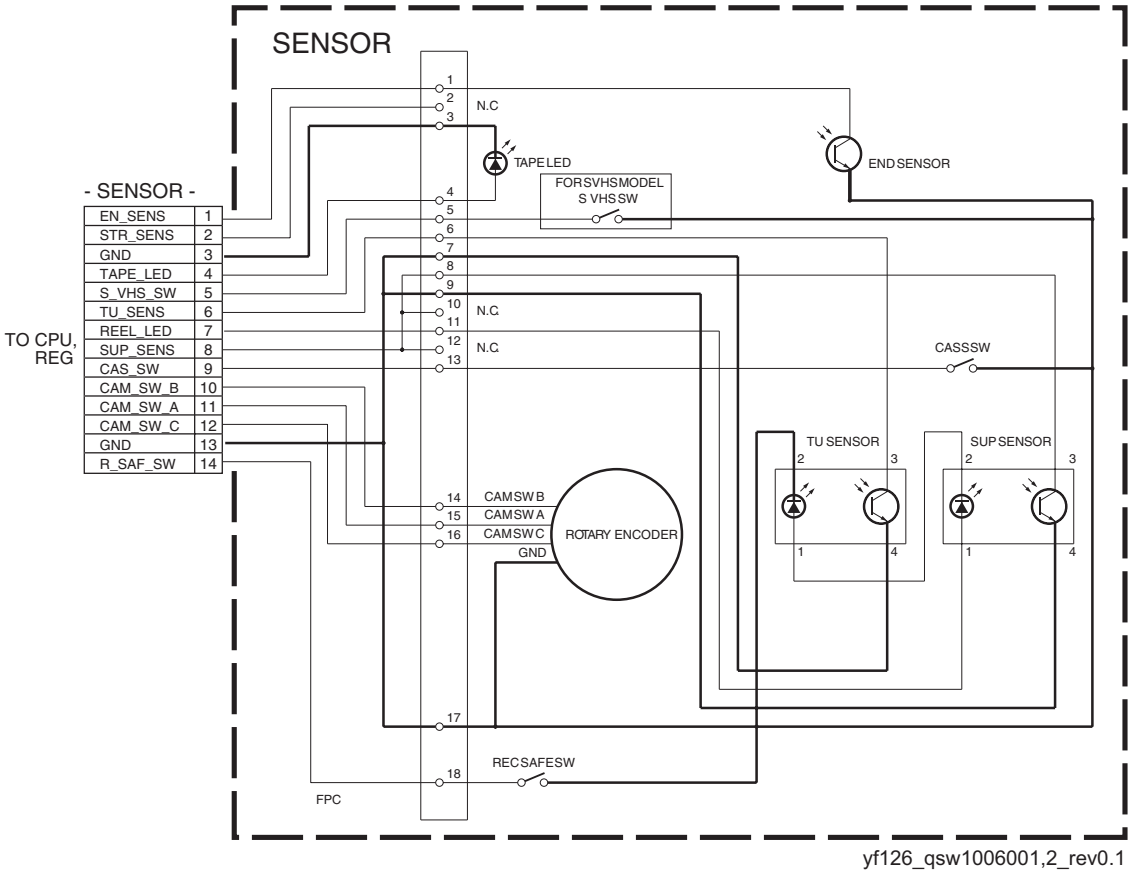
yf126_y30289001a_rev0.1

NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.

■ ZOOM UNIT AND SENSOR SCHEMATIC DIAGRAMS



yf126_ly10393002e_rev0.1



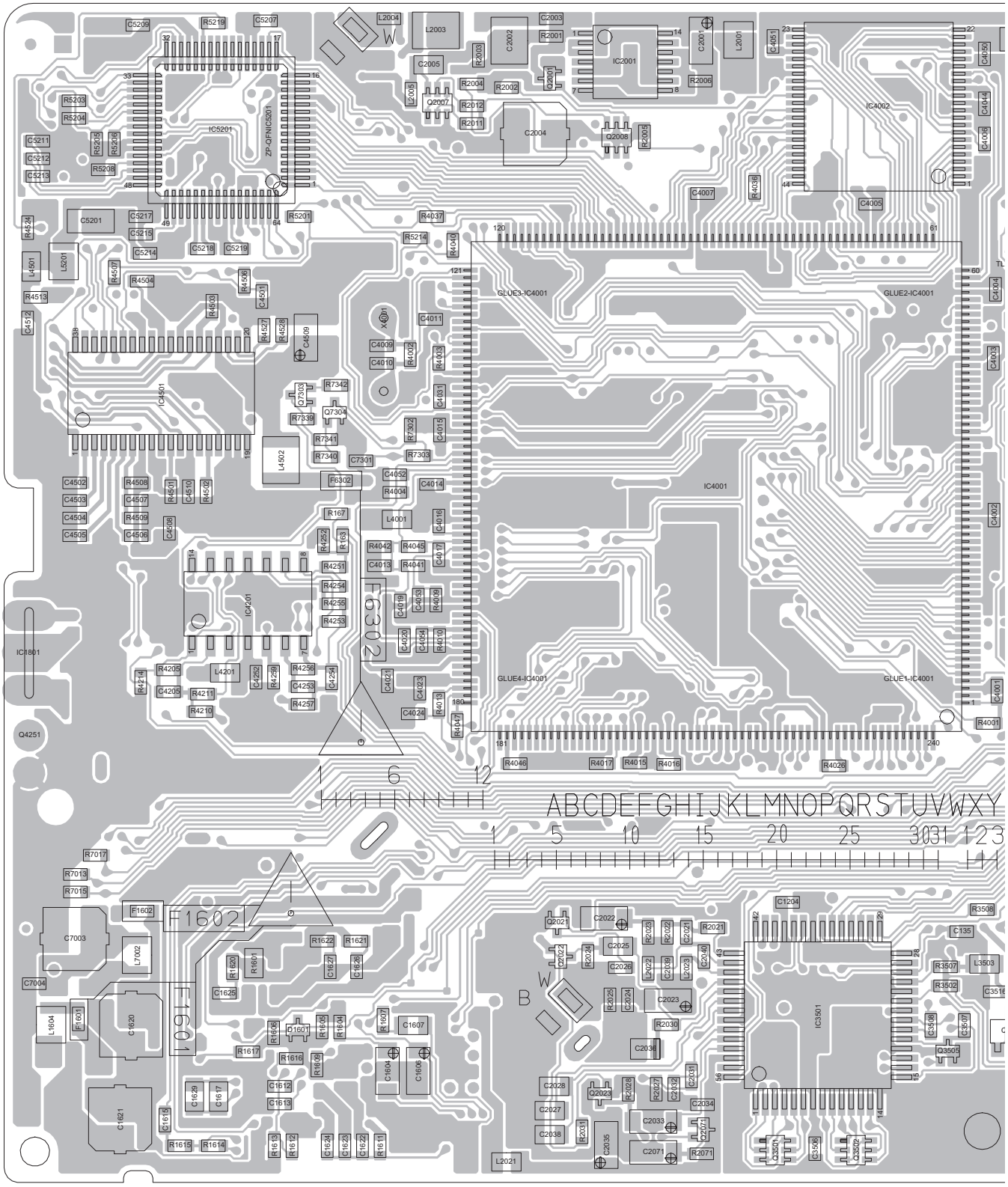
yf126_qsw1006001,2_rev0.1

NOTES: 1. For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
2. The parts with marked (∗) is not used.
3. The schematic diagram is only for reference. Avoid replacing individual parts. Replace the entire unit only.

■ MAIN CIRCUIT BOARD

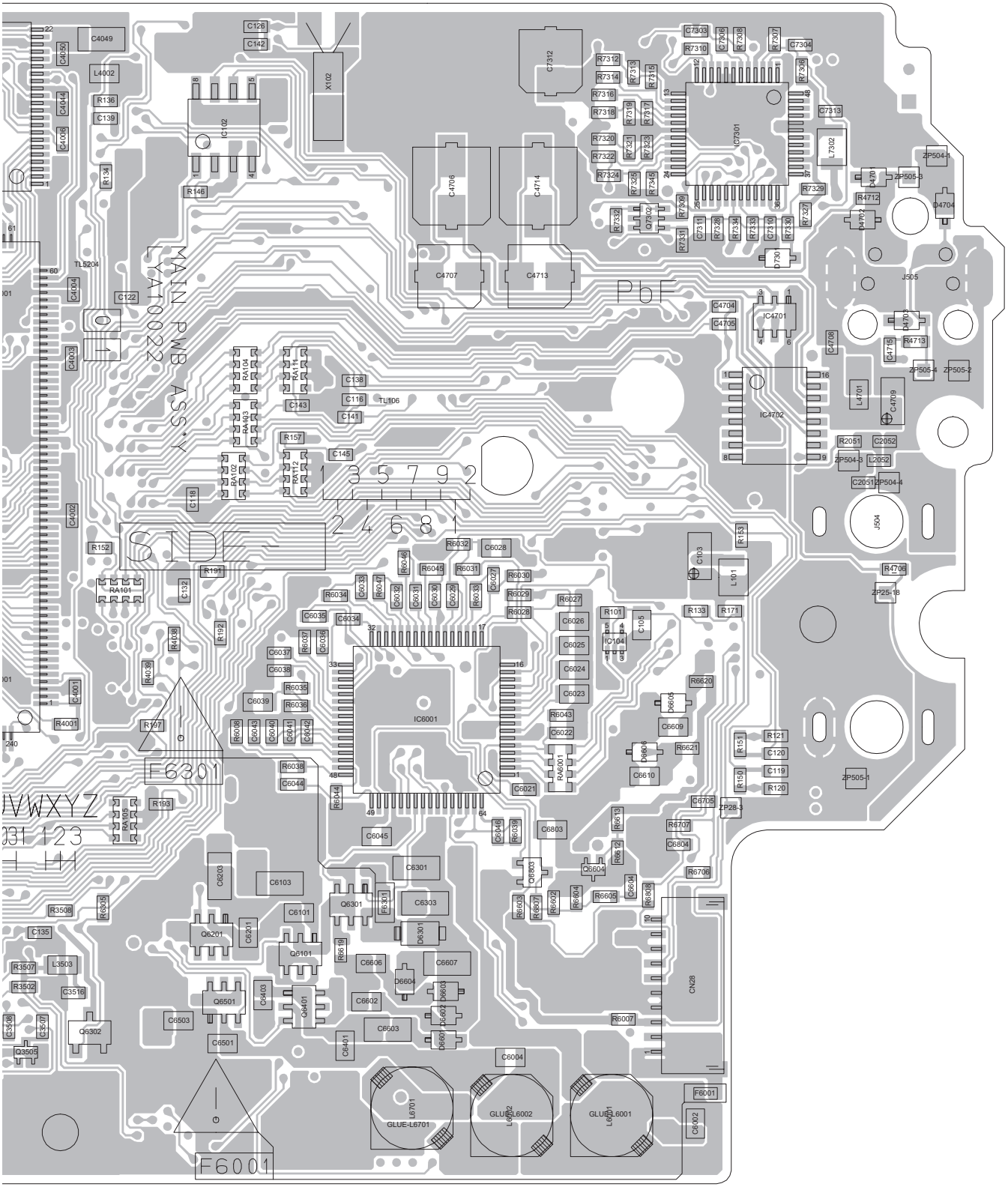
<01>MAIN
LYB10022-001C

FOIL SIDE(B)



CAUTION :
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).
ATTENTION :
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE,
REMPLACER LES FUSIBLES PAR UNAAUTRE DE MEME TYPE ET DE MEME TENSION.

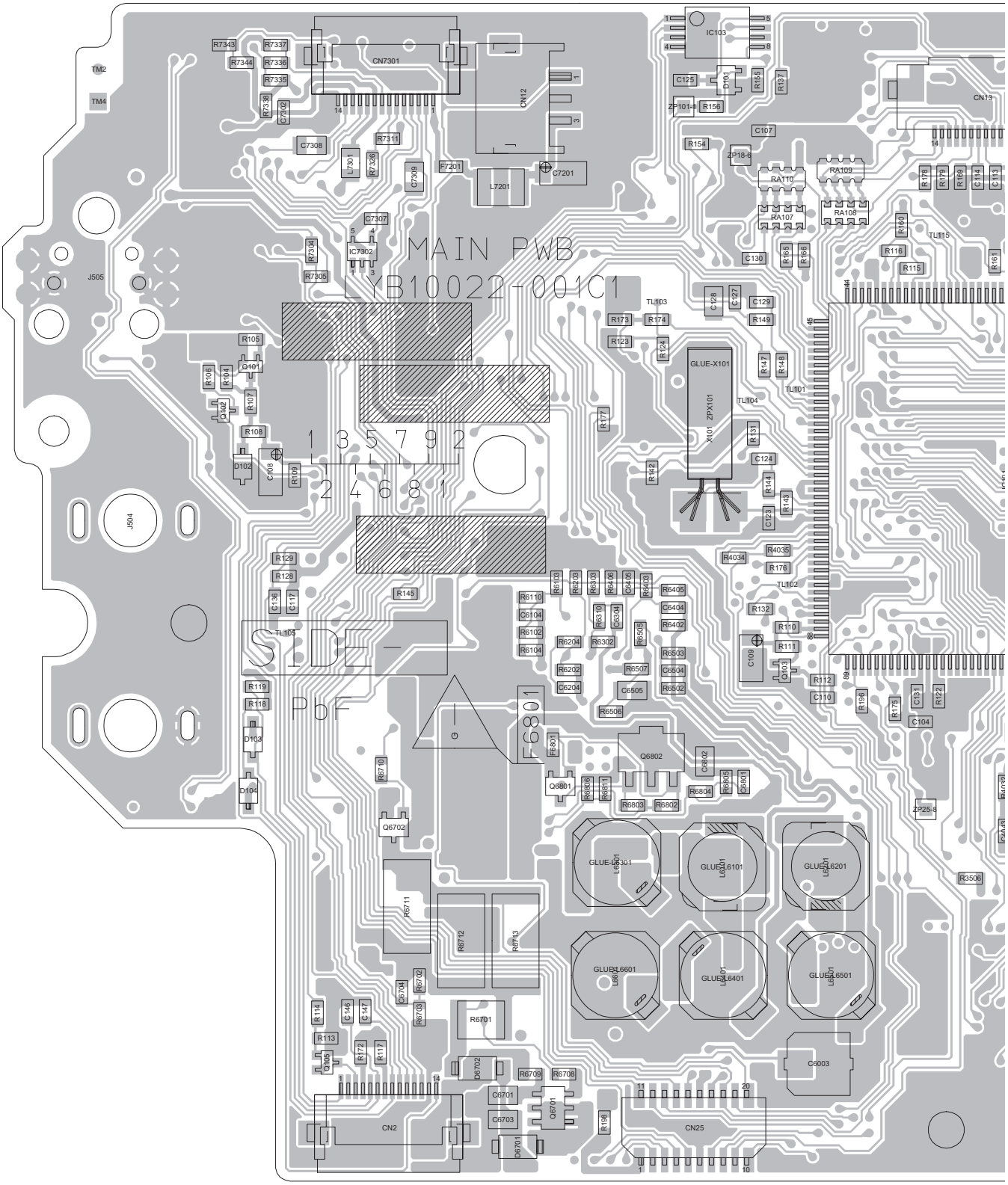
SIDE(B)



■ MAIN CIRCUIT BOARD

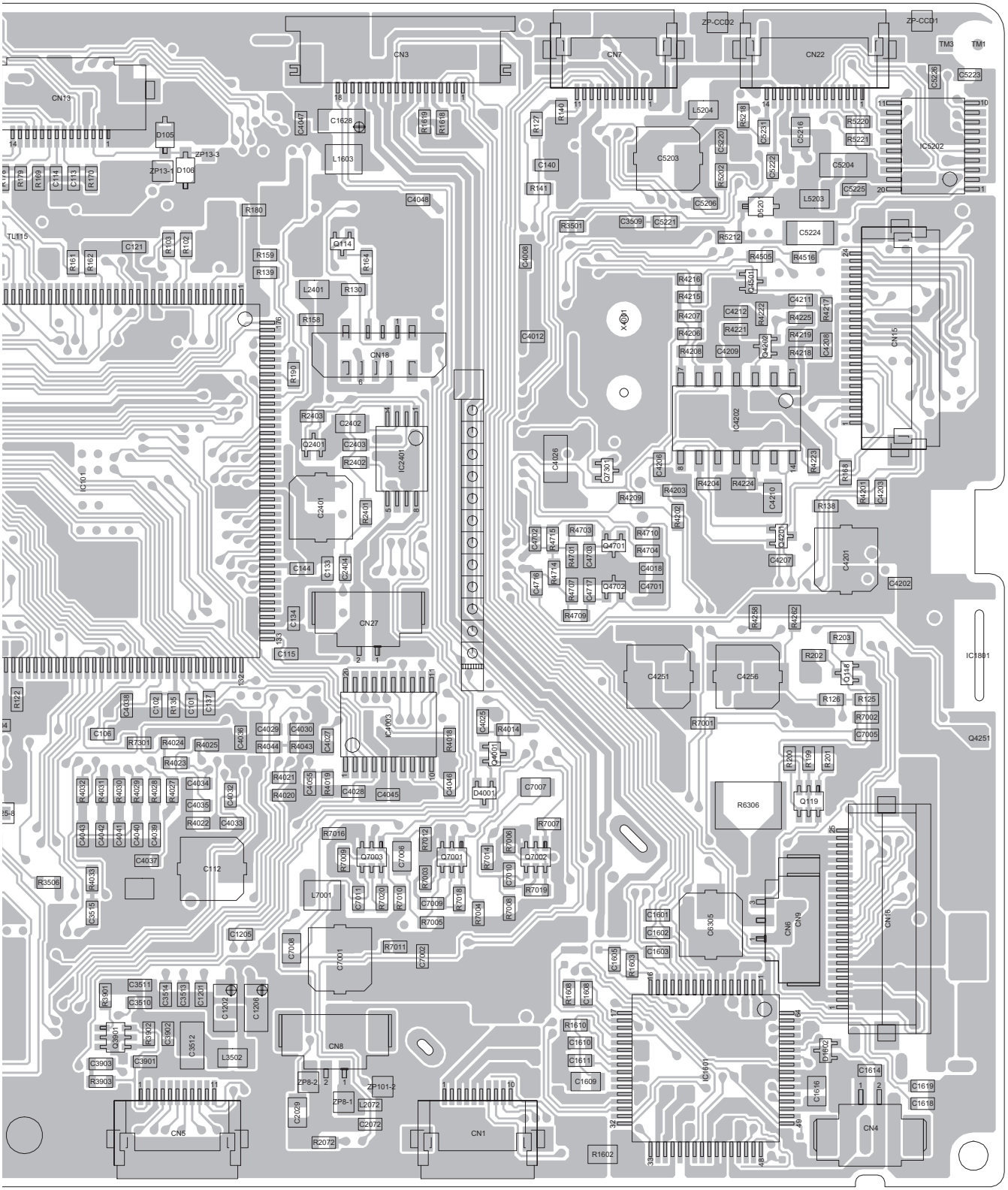
<01>MAIN
LYB10022-001C

COMPONENT SIDE(A)



CAUTION :
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).
ATTENTION :
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE,
REMPLACER LES FUSIBLES PAR UNAAUTRE DE MEME TYPE ET DE MEME TENSION.

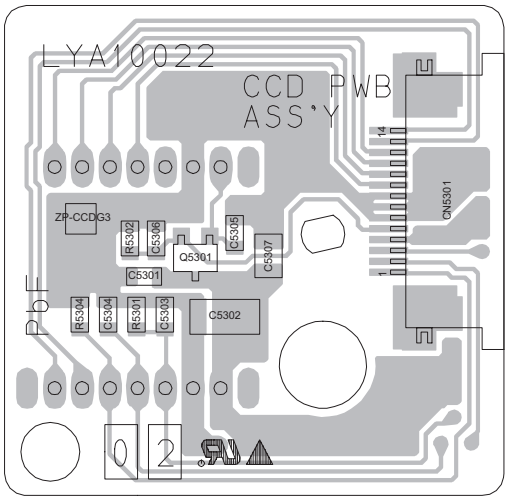
SIDE(A)



■ CCD, FRONT, TOP, VF AND MONITOR CIRCUIT BOARDS

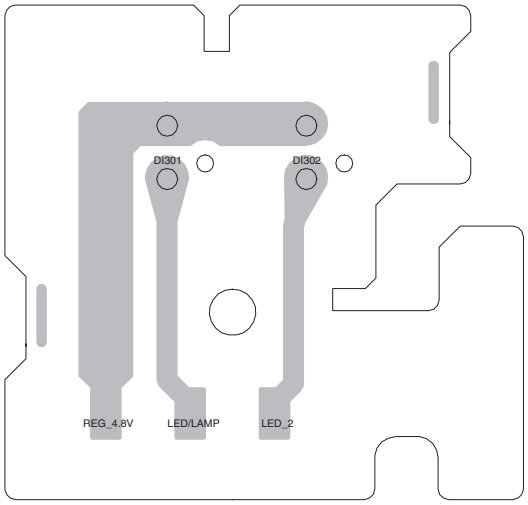
<02>CCD
LYB10022-001C

COMPONENT SIDE(A)



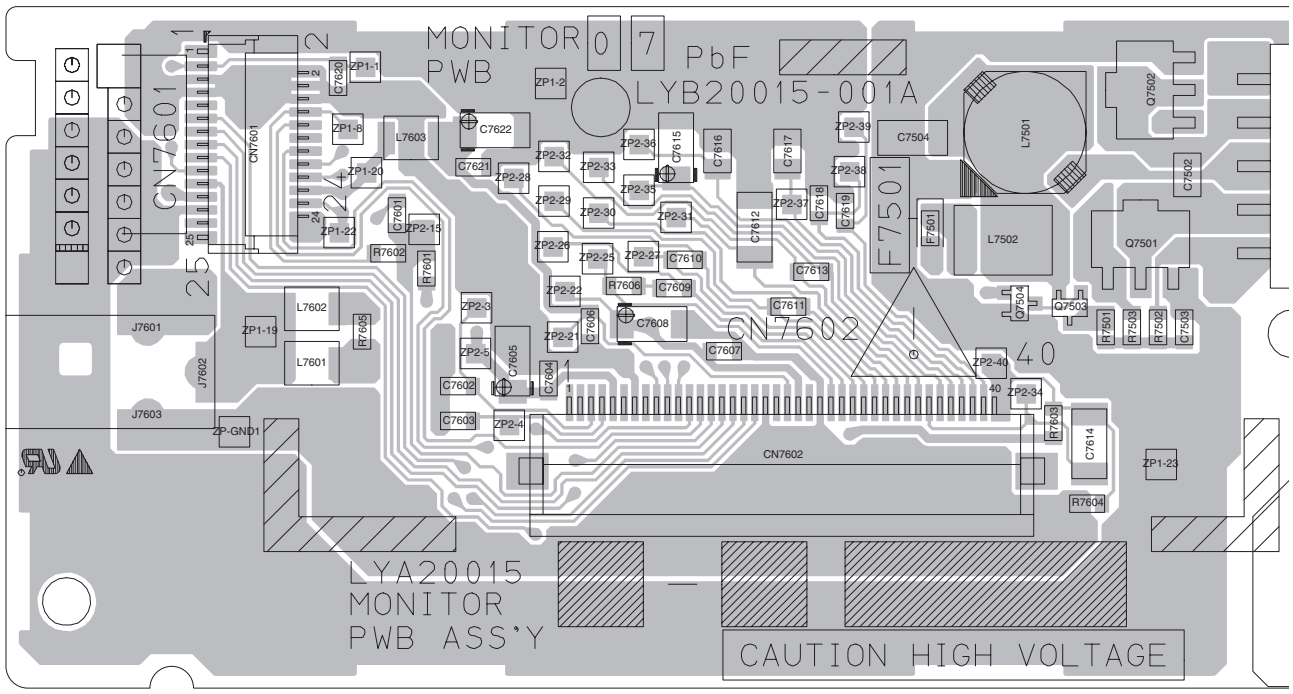
<03>FRONT
LYB20017-001A

COMPONENT SIDE(A)



<07>MONITOR
LYB20015-001A

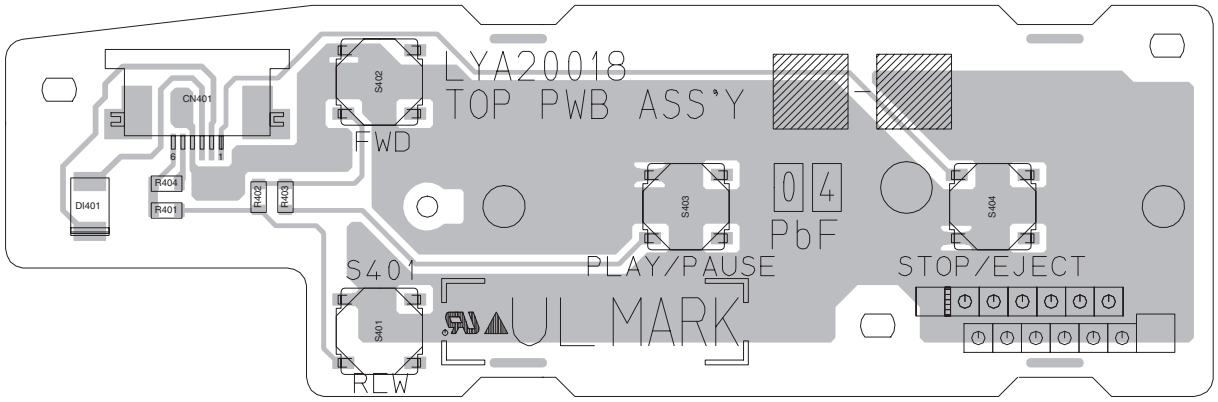
COMPONENT SIDE(A)



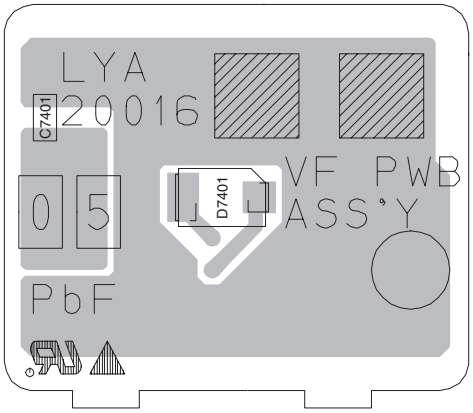
CAUTION :
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).
ATTENTION :
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE,
REMPLACER LES FUSIBLES PAR UNAAUTRE DE MEME TYPE ET DE MEME TENSION.

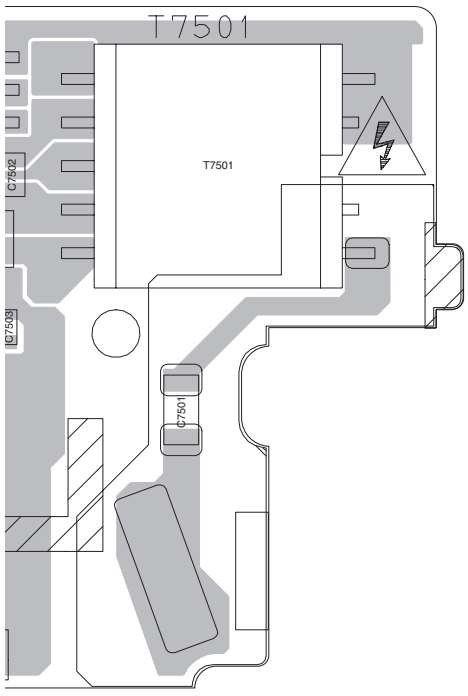
<04>TOP
LYB20018-001A

COMPONENT SIDE(A)

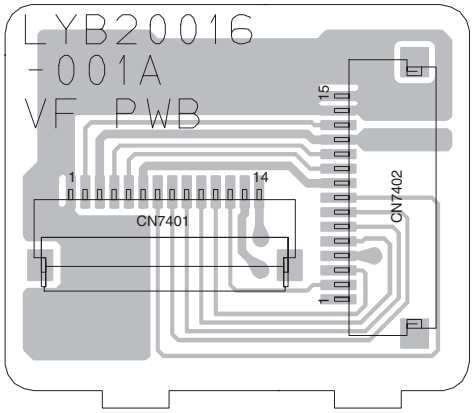


<05>BWVF
LYB20016-001A **FOIL SIDE(B)**

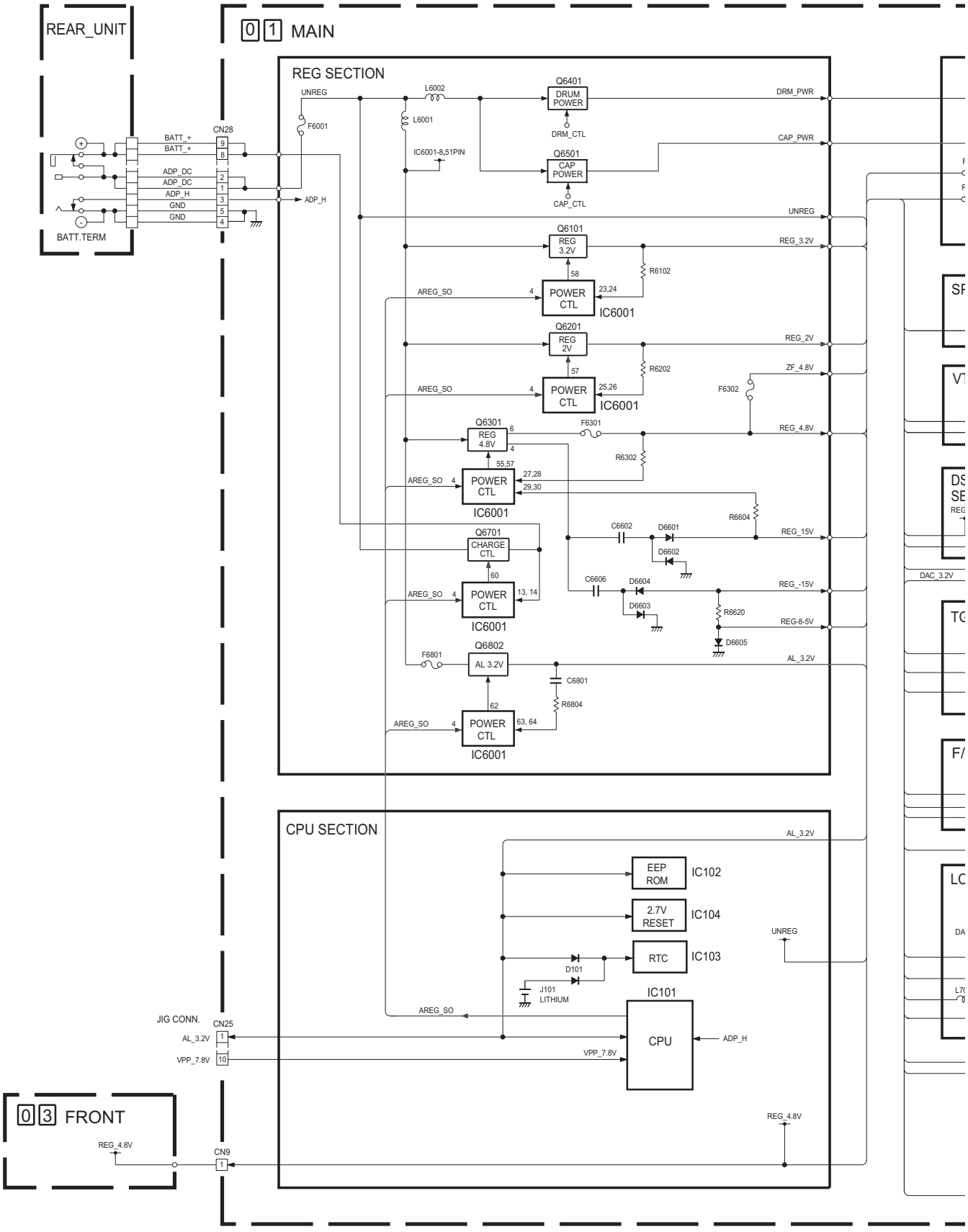


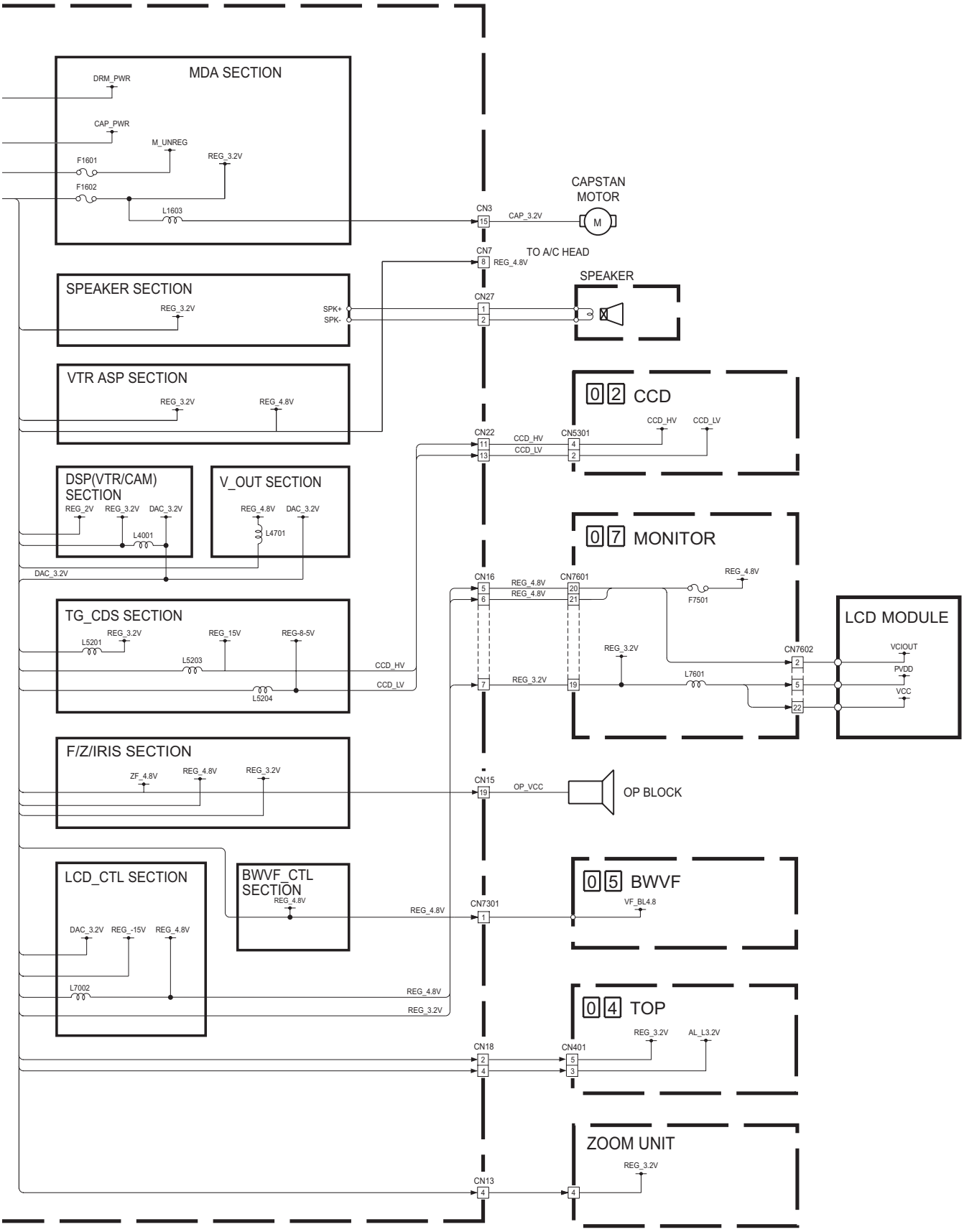


COMPONENT SIDE(A)

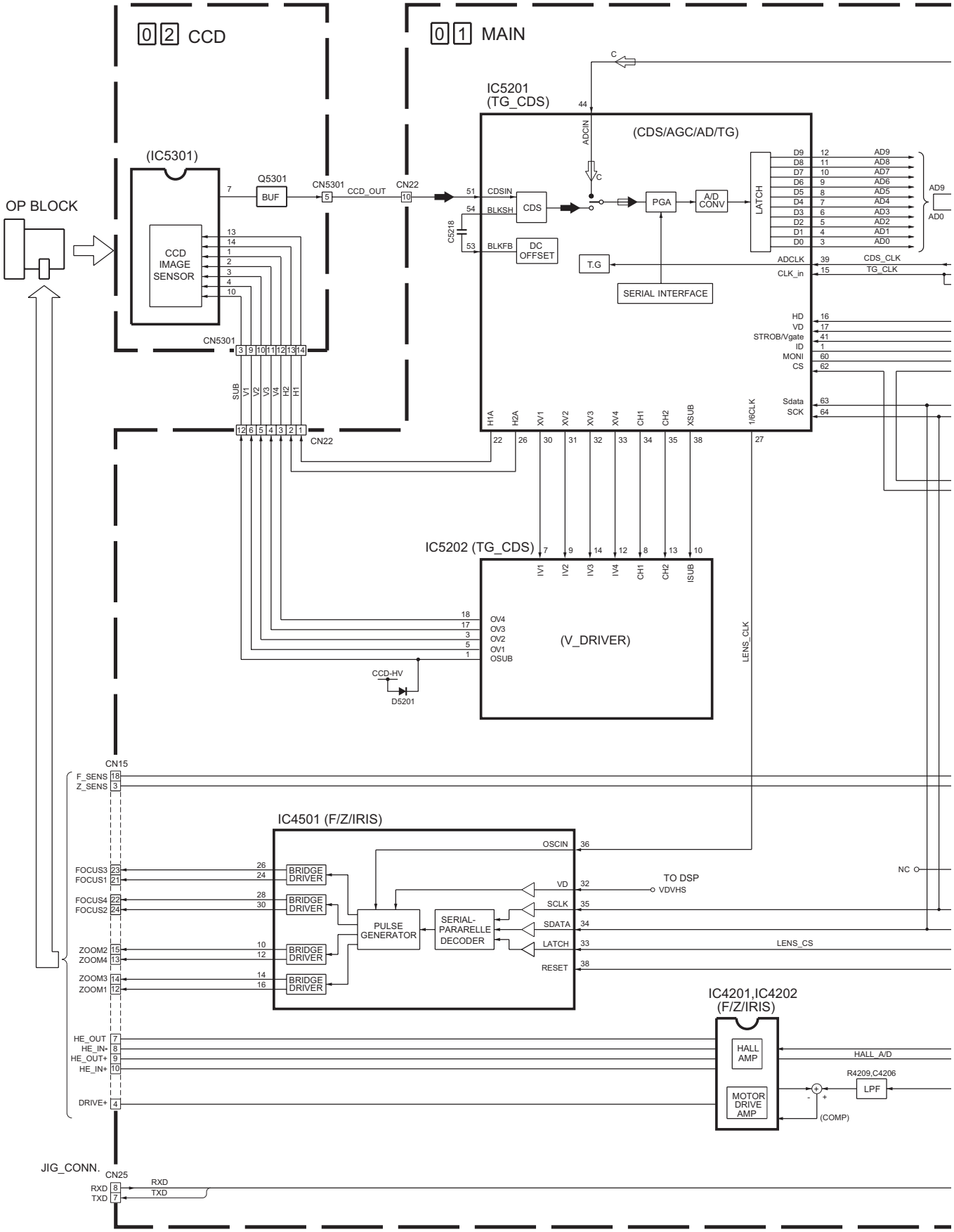


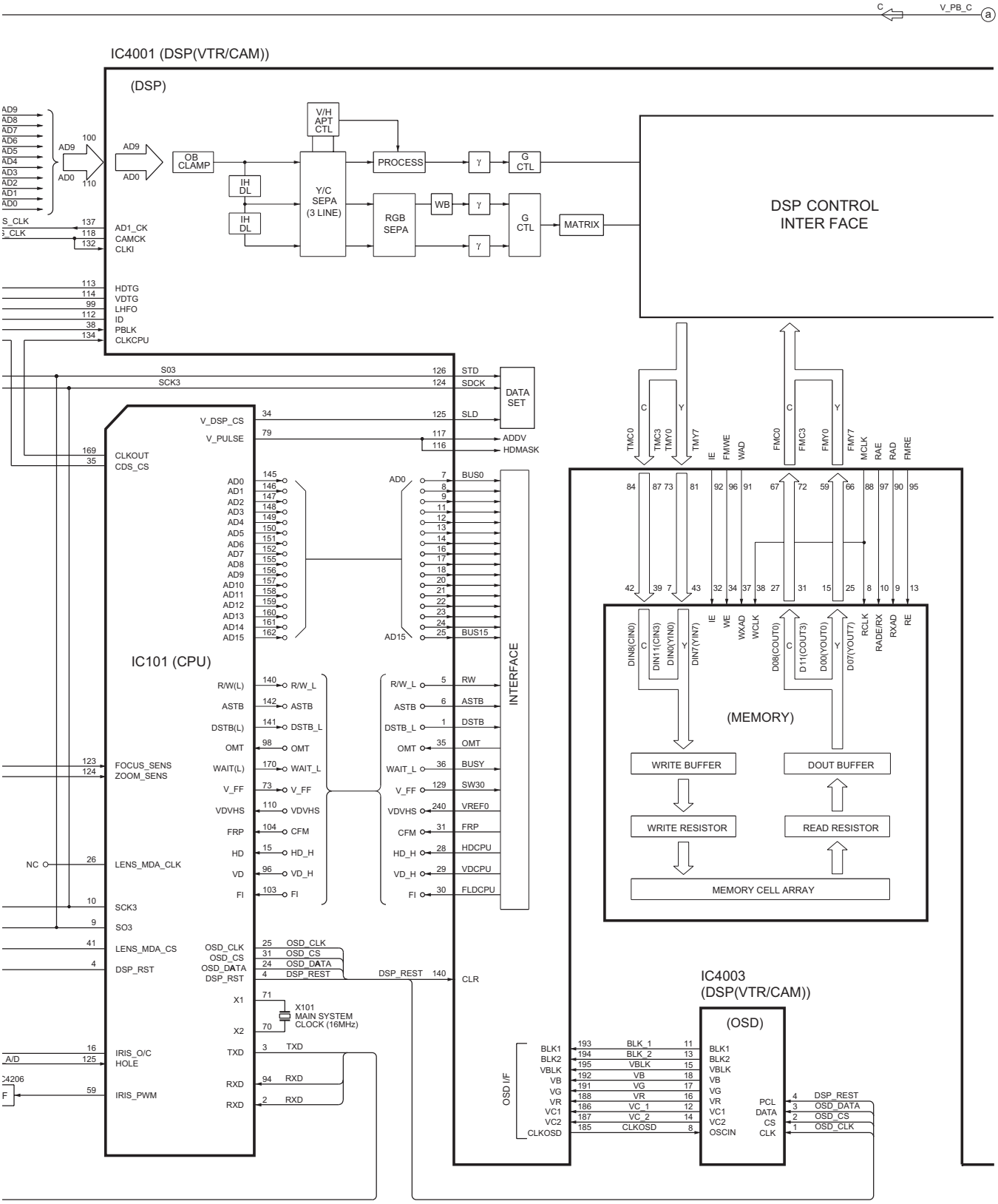
■ POWER SYSTEM BLOCK DIAGRAM



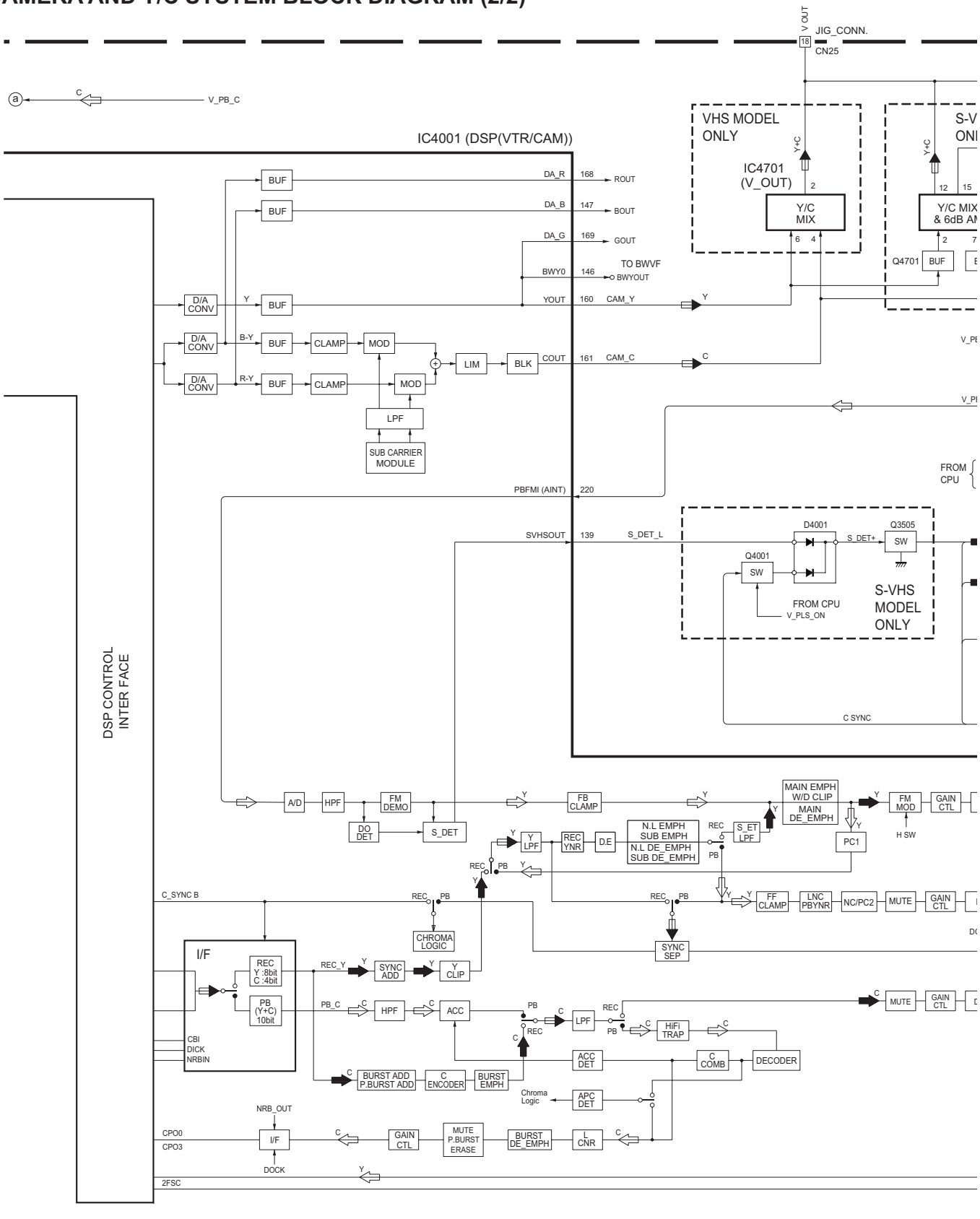

MDA SECTION
DRM_PWR
CAP_PWR
M_UNREG
REG_3.2V
F1601
F1602
L1603
CAPSTAN MOTOR
CN3
15
CAP_3.2V
M
CN7
8
REG_4.8V
TO A/C HEAD
SPEAKER SECTION
REG_3.2V
SPK+
SPK-
CN27
1
2
SPEAKER
VTR ASP SECTION
REG_3.2V
REG_4.8V
02 CCD
CCD_HV
CCD_LV
CN22
11
13
CCD_HV
CCD_LV
CN5301
4
2
DSP(VTR/CAM) SECTION
REG_2V
REG_3.2V
DAC_3.2V
L4001
V_OUT SECTION
REG_4.8V
DAC_3.2V
L4701
07 MONITOR
CN16
5
6
REG_4.8V
REG_4.8V
CN7601
20
21
REG_4.8V
F7501
LCD MODULE
TG_CDS SECTION
REG_3.2V
L5201
REG_15V
REG-8-5V
L5203
L5204
CCD_HV
CCD_LV
REG_3.2V
7
REG_3.2V
19
L7601
CN7602
2
5
22
VCIOUT
PVDD
VCC
F/Z/IRIS SECTION
ZF_4.8V
REG_4.8V
REG_3.2V
CN15
19
OP_VCC
OP BLOCK
LCD_CTL SECTION
DAC_3.2V
REG_-15V
REG_4.8V
L7002
BWVF_CTL SECTION
REG_4.8V
REG_4.8V
CN7301
1
05 BWVF
VF_BL4.8
REG_4.8V
REG_3.2V
04 TOP
REG_3.2V
AL_L3.2V
CN18
2
4
CN401
5
3
ZOOM UNIT
REG_3.2V
CN13
4
4

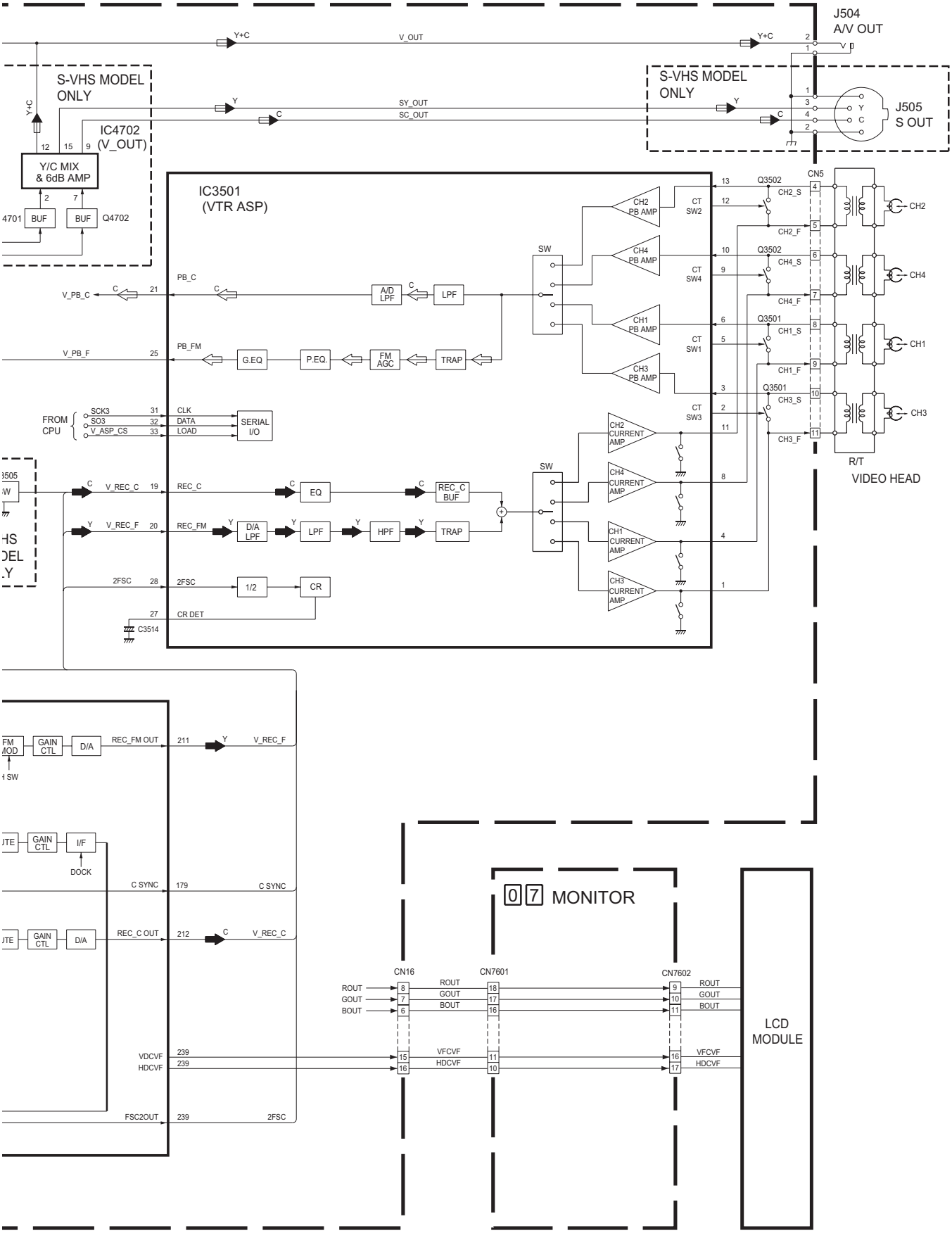
■ CAMERA AND Y/C SYSTEM BLOCK DIAGRAM (1/2)




C
V_PB_C
a
IC4001 (DSP(VTR/CAM))
(DSP)
AD9
AD8
AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
100
110
OB CLAMP
IH DL
V/H APT CTL
Y/C SEPA (3 LINE)
PROCESS
RGB SEPA
WB
γ
G CTL
MATRIX
DSP CONTROL INTER FACE
AD1_CK
CAMCK
CLKI
HDTG
VDTG
LHFO
ID
PBLK
CLKCPU
S03
SCK3
STD
SDCK
SLD
DATA SET
V_DSP_CS
V_PULSE
ADDV
HDMASK
CLKOUT
CDS_CS
IC101 (CPU)
R/W(L)
ASTB
DSTB(L)
OMT
WAIT(L)
V_FF
VDVHS
FRP
HD
VD
FI
FOCUS_SENS
ZOOM_SENS
LENS_MDA_CLK
SCK3
SO3
LENS_MDA_CS
DSP_RST
OSD_CLK
OSD_CS
OSD_DATA
DSP_REST
X1
X2
X101
MAIN SYSTEM CLOCK (16MHz)
IRIS_O/C
HOLE
IRIS_PWM
TXD
RXD
INTERFACE
BUS0
BUS15
BUSY
SW30
VREF0
HDCPU
VDCPU
FLDCPU
CLR
TMC0
TMC3
TMY0
TMY7
IE
FMWE
WAD
FMC0
FMC3
FMY0
FMY7
MCLK
RAE
RAD
FMRE
(MEMORY)
WRITE BUFFER
DOUT BUFFER
WRITE RESISTOR
READ RESISTOR
MEMORY CELL ARRAY
DIN8(CIN0)
DIN11(CIN3)
DIN0(YIN0)
DIN7(YIN7)
WE
WXAD
WCLK
D08(COUT0)
D11(COUT3)
D00(YOUT0)
D07(YOUT7)
RCLK
RADE/RX
RXAD
RE
IC4003
(DSP(VTR/CAM))
(OSD)
OSD I/F
BLK1
BLK2
VBLK
VB
VG
VR
VC1
VC2
CLKOSD
OSCIN
PCL
DATA
CS
CLK
DSP_REST
OSD_DATA
OSD_CS
OSD_CLK

■ CAMERA AND Y/C SYSTEM BLOCK DIAGRAM (2/2)




J504
A/V OUT
S-VHS MODEL ONLY
IC4702 (V_OUT)
Y/C MIX & 6dB AMP
BUF
BUF
Q4702
J505
S OUT
IC3501
(VTR ASP)
A/D LPF
LPF
G.EQ
P.EQ.
FM AGC
TRAP
SERIAL I/O
EQ
REC_C BUF
D/A LPF
HPF
1/2
CR
CH2 PB AMP
CH4 PB AMP
CH1 PB AMP
CH3 PB AMP
CH2 CURRENT AMP
CH4 CURRENT AMP
CH1 CURRENT AMP
CH3 CURRENT AMP
CT SW2
CT SW4
CT SW1
CT SW3
SW
Q3502
Q3501
CN5
CH2
CH4
CH1
CH3
R/T
VIDEO HEAD
FROM CPU
SCK3
SO3
V_ASP_CS
CLK
DATA
LOAD
PB_C
PB_FM
V_PB_C
V_PB_F
V_REC_C
V_REC_F
REC_C
REC_FM
2FSC
CR DET
C3514
GAIN CTL
D/A
I/F
DOCK
REC_FM OUT
REC_C OUT
C SYNC
FSC2OUT
07 MONITOR
CN16
CN7601
CN7602
ROUT
GOUT
BOUT
VDCVF
HDCVF
VFCVF
LCD MODULE

■ VOLTAGE CHARTS

<CPU>

MODE PIN NO.	REC	PLAY
IC101		
1	3.1	3.1
2	3.1	3.1
3	0	0
4	3.1	3.1
5	0	0
6	0	0
7	3.0	3.0
8	0.4	0
9	0.3	0.5
10	3.0	3.0
11	0	0
12	0.4	0
13	3.1	3.1
14	0	0
15	0.2	0.2
16	1.4	0
17	0	0
18	3.1	3.0
19	0	0
20	3.1	3.1
21	0	0
22	0	0
23	0	0
24	0	2.7
25	3.0	3.0
26	1.5	1.4
27	3.1	3.1
28	0	0
29	2.3	2.4
30	3.1	3.1
31	2.8	2.6
32	3.1	3.1
33	3.1	3.0
34	3.1	3.1
35	2.9	3.0
36	0.2	0
37	0	0
38	0	0
39	3.1	3.1
40	0	0
41	0	0
42	3.0	3.0
43	3.1	0
44	0	0
45	0	0
46	2.9	2.9
47	3.1	3.1
48	2.9	2.9
49	2.9	0
50	2.9	2.9
51	0	2.9
52	0	2.9
53	3.0	3.0
54	-	-
55	3.1	0
56	0	0
57	1.6	1.7
58	1.2	1.4
59	1.5	0
60	0	0
61	2.8	2.9
62	2.8	2.8
63	3.1	3.1
64	0.5	0.6
65	0	0
66	3.1	3.0
67	3.1	3.1
68	0	0
69	3.1	3.1
70	1.3	1.3
71	1.4	1.3
72	0	0
73	1.5	1.6
74	0	0
75	0	0
76	3.0	2.9
77	0	0
78	0	0
79	0	0
80	0	0
81	3.1	3.0
82	0	0
83	1.7	0
84	1.6	1.6
85	3.1	0
86	3.0	0
87	3.1	0
88	0	0
89	0.1	0.1
90	0.2	0.2
91	0	0
92	2.9	2.9
93	2.9	2.9
94	3.1	3.1
95	3.0	3.0
96	0	0

MODE PIN NO.	REC	PLAY
97	0	0
98	0	0.1
99	3.1	3.1
100	0	0
101	3.1	3.1
102	0	0
103	1.6	1.6
104	0.6	0.5
105	3.1	3.1
106	0	0
107	3.1	3.1
108	3.1	3.1
109	1.6	1.5
110	0	0
111	1.5	1.6
112	1.8	1.8
113	2.9	2.9
114	3.0	3.0
115	33.0	3.0
116	3.0	3.1
117	0	2.5
118	3.1	3.1
119	3.0	3.0
120	3.2	3.2
121	0.5	0.4
122	0	0
123	0	0
124	0	0
125	1.5	0.5
126	3.1	3.2
127	1.4	1.6
128	3.0	3.0
129	0	0
130	1.6	1.6
131	3.1	3.1
132	0	0
133	3.1	3.1
134	0	0
135	2.9	3.1
136	3.1	3.1
137	0	0
138	0	0
139	0	0
140	3.1	3.1
141	3.0	3.1
142	3.0	3.1
143	0	0
144	3.1	3.1
145	0	0
146	0	0.5
147	0.7	0.6
148	0	0.3
149	0.6	0.5
150	0.6	0.5
151	0.6	0.5
152	0.6	0.4
153	3.1	3.1
154	0	0
155	0.7	0.6
156	0.6	0.5
157	0.6	0.2
158	0.6	0.6
159	0.5	0.6
160	0.4	0.5
161	0.3	0.4
162	0.3	0.3
163	0	0
164	3.1	3.1
165	0	0
166	3.1	0
167	0	0
168	0	0
169	1.2	1.2
170	3.0	3.1
171	0	0
172	0	0
173	0	0
174	0	0
175	0	0
176	0	0
IC102		
1	3.0	3.1
2	0	0
3	3.1	3.0
4	0	0
5	0	0
6	3.0	3.0
7	3.0	3.1
8	3.1	3.1
IC103		
1	0	0
2	3.1	3.1
3	0	0
4	0	0
5	0	0
6	0.5	0.5
7	0.4	0.3

MODE PIN NO.	REC	PLAY
8	3.0	2.9
IC104		
1	3.1	3.1
2	0	0
3	0	0
4	0	0
5	3.1	3.1
Q101		
E	11.0	11.0
C	11.0	11.0
B	10.3	10.3
Q102		
E	0	0
C	0	0
B	3.1	3.1
Q103		
E	0	0
C	0	4.8
B	0.6	0
Q105		
E	0	0
C	3.9	3.9
B	0	0
Q114		
E	0	0
C	0	0
B	3.1	3.1
Q118		
E	0	0
C	0	0
B	0.7	0.7
Q119		
1	0	0
2	0	0
3	0.6	0.6
4	0	0
5	0	0
6	0.6	0.6

<MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0.6	0.7
3	0.6	0.7
4	0	0
5	0.6	0.7
6	0	0
7	0	0
8	1.5	1.6
9	1.5	1.6
10	0	1.5
11	1.5	1.5
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	11.0	11.0
27	0	0
28	2.8	2.9
29	0.9	0.9
30	1.3	1.4
31	0.7	0.7
32	1.0	1.0
33	1.4	1.4
34	1.4	1.4
35	1.4	1.4
36	0	0
37	1.4	0
38	0	0
39	1.6	1.6
40	3.8	3.8
41	0	0
42	0	0
43	0	0
44	0	0
45	4.8	4.8
46	1.6	1.6
47	1.6	1.5
48	1.6	0
49	1.6	1.5
50	0	0
51	13.7	0
52	2.3	0
53	12.4	0
54	0	0
55	0	0
56	0	0
57	3.1	3.1
58	2.9	2.9
59	0	0
60	1.6	0
61	0.5	0.6
62	1.6	1.6
63	0.7	0.7
64	0.9	0

<VTR ASP>

MODE PIN NO.	REC	PLAY
IC2001		
1	1.4	3.1
2	1.5	0
3	1.5	0
4	1.4	3.1
5	1.5	0
6	1.4	0
7	0	0
8	1.4	0
9	1.4	3.1
10	1.5	0
11	1.5	3.1
12	1.5	0
13	1.5	3.1
14	3.0	3.1
IC3501		
1	2.2	2.1
2	2.2	2.3
3	2.2	2.2
4	2.1	2.1
5	2.2	2.2
6	2.2	2.1
7	4.8	4.8
8	2.1	2.1
9	2.1	2.2
10	2.1	2.1
11	2.1	2.2
12	2.3	2.2
13	2.1	2.1
14	0	0
15	3.0	0
16	2.8	0.4
17	4.0	4.5
18	0	0
19	2.8	2.8
20	2.8	0
21	1.0	2.1
22	-	2.2
23	2.3	2.3
24	0	4.8
25	2.2	2.3
26	0	2.6
27	2.5	2.5
28	2.8	2.9
29	0	0
30	1.5	1.5
31	3.0	2.9
32	0.3	0.2
33	3.1	3.1
34	1.8	1.8
35	1.7	0
36	0	0
37	2.5	2.2
38	3.0	3.0
39	4.8	4.8
40	2.4	2.1
41	2.2	2.1
42	2.8	2.8
43	2.7	2.5
44	2.7	2.4
45	2.4	2.4
46	2.5	2.9
47	0.3	0.2
48	2.4	2.4
49	2.4	0
50	0	0
51	2.4	2.4
52	2.4	2.4
53	2.4	2.5
54	4.8	4.8
55	2.4	2.5
56	0	1.4
Q2001		
E	3.0	3.1
C	1.4	3.1
B	3.0	0
Q2007		
1	0	0
2	-14.8	0.7
3	0	0
4	-7.3	0
5	-14.6	0.7
6	0	0
Q2008		
1	3.1	1.8
2	3.0	1.2
3	3.1	1.2
4	3.0	1.7
5	3.1	1.2
6	-14.6	0.8
Q2021		
E	0	0
C	0.3	0
B	0	0
Q2022		
E	0	0
C	0	0

MODE PIN NO.	REC	PLAY
B	0	0
Q2023		
E	0	0
C	0	0
B	0	0
Q2071		
E	4.4	4.5
C	4.8	4.8
B	4.8	4.8
Q3501		
1	2.1	2.0
2	2.3	2.3
3	2.2	2.1
4	2.2	2.1
5	2.2	2.3
6	2.1	2.1
Q3502		
1	2.2	2.1
2	2.2	2.2
3	2.0	2.1
4	2.1	2.1
5	2.3	2.3
6	2.1	2.1
Q3505		
E	0	0
C	2.8	2.8
B	0	0
Q3901		
1	4.7	4.7
2	4.1	4.5
3	4.1	4.5
4	4.6	4.8
5	4.1	4.5
6	0	0

<SPEAKER>

MODE PIN NO.	REC	PLAY
IC2401		
1	2.9	2.9
2	1.1	1.1
3	1.2	1.2
4	1.2	1.2
5	1.2	1.2
6	3.2	3.2
7	0	0
8	1.2	0
Q2401		
E	0	0
C	2.9	2.9
B	0	0

<DSP(VTR/CAM)>

MODE PIN NO.	REC	PLAY
IC4001		
1	3.0	3.1
2	0.7	0.6
3	0	0
4	1.5	1.5
5	3.0	3.0
6	3.0	3.0
7	0.8	0.7
8	0.7	0.7
9	0.6	0.7
10	3.1	3.1
11	0.7	0.6
12	0.7	0.7
13	0.6	0.8
14	0.6	0.8
15	0	0
16	0	0.6
17	0.7	0.8
18	0.6	0.8
19	1.8	1.8
20	0.6	0
21	0.6	0.9
22	0.6	0.7
23	0.5	0.6
24	0.5	0.8
25	0.5	0.6
26	0	0
27	1.8	1.8
28	0.3	0.2
29	0	0
30	1.5	1.5
31	0.3	0.6
32	2.9	2.9
33	1.8	1.8
34	3.1	3.1
35	0	0
36	3.1	3.0
37	0	0
38	0.4	0
39	1.2	0.7
40	1.1	0.7
41	3.2	3.2
42	1.1	0
43	0.9	0.6
44	0	0
45	1.0	0
46	1.2	0.8
47	0.7	0
48	0	0
49	1.2	0
50	1.21	0.6
51	1.1	0
52	1.4	0
53	1.2	1.1
54	1.6	1.5
55	0	0
56	0.3	0.2
57	0	0
58	3.1	3.2
59	1.1	2.1
60	1.2	1.0
61	1.1	2.1
62	0.9	1.7
63	0.8	2.2
64	0.8	2.2
65	1.0	2.0
66	0.5	1.3
67	1.2	1.7
68	1.3	1.8
69	0	0
70	1.8	1.8
71	1.1	1.0
72	1.2	2.0
73	1.1	1.8
74	1.3	1.3
75	1.1	1.5
76	1.8	1.8
77	0.9	1.9
78	0.9	2.0
79	0.8	2.0
80	1.0	1.9
81	0.6	1.1
82	0	0
83	1.8	1.8
84	1.2	1.3
85	1.3	1.4
86	1.2	1.3
87	1.5	1.4
88	1.3	1.2
89	0	0
90	0	0
91	0	0
92	3.0	3.0
93	0	0
94	3.1	3.2
95	2.6	2.6
96	2.6	2.6

MODE PIN NO.	REC	PLAY
97	0	0
98	0	0
99	0	0
100	0	1.5
101	0.4	1.5
102	0.8	1.5
103	0.6	1.5
104	0	0
105	2.1	1.5
106	0.9	1.5
107	1.1	1.5
108	1.3	1.5
109	1.3	1.6
110	1.3	1.5
111	3.1	3.1
112	1.5	0
113	2.8	0.2
114	3.1	0
115	0	0
116	0	0
117	0	0
118	1.5	1.5
119	0	0
120	0	0
121	1.5	1.5
122	1.5	1.5
123	1.8	1.8
124	0	3.0
125	0	3.1
126	0.4	0.2
127	0	0
128	0	1.8
129	1.6	1.6
130	1.2	1.1
131	1.2	1.2
132	1.6	1.6
133	1.8	1.8
134	0	0
135	3.1	3.1
136	0	0
137	0	1.2
138	0	0
139	0	0
140	3.1	3.0
141	3.2	3.1
142	3.2	3.2
143	0	0
144	3.0	3.1
145	0	0
146	0	0
147	0	0.8
148	1.1	1.1
149	1.1	0
150	0	0
151	0	0
152	0	3.1
153	0	0
154	0	0
155	3.1	3.2
156	0	0
157	0	0
158	1.0	1.1
159	1.1	1.1
160	0.5	0.5
161	0.6	0.6
162	0	0
163	3.0	3.1
164	0	0
165	0	0
166	0	3.1
167	0	0
168	0.9	0
169	0.8	0.8
170	1.1	1.1
171	1.1	1.1
172	0	0
173	0	0
174	0	3.1
175	0	0
176	0	0
177	0	3.2
178	1.5	1.5
179	0	0
180	1.4	1.5
181	3.1	3.1
182	0.8	0.8
183	3.1	3.1
184	2.9	2.9
185	0	1.5
186	0	0
187	0	0
188	0	0
189	0	0
190	1.8	1.7
191	0	0
192	0	0
193	0	0

MODE PIN NO.	REC	PLA
194	0	
195	0	
196	0	
197	3.1	3.
198	3.1	3.
199	0	
200	3.1	3.
201	0	
202	3.1	3.
203	0	
204	1.8	1.
205	0	
206	3.1	3.
207	0	
208	0	
209	1.1	1.
210	1.1	
211	0.5	
212	0.2	
213	0	
214	3.1	3.
215	0	
216	0	
217	3.1	3.
218	0	
219	3.1	3.
220	1.2	1.
221	1.0	1.
222	0	
223	2.1	2.
224	0	
225	3.1	3.
226	0	
227	0	
228	0	
229	2.3	
230	0	
231	3.1	3.
232	1.1	1.
233	0	1.
234	1.9	1.
235	1.6	1.
236	0	
237	1.1	1.
238	1.1	1.
239	1.4	1.
240	0	
IC4002		
1	0	
2	0	2.
3	0.8	2.
4	1.0	2.
5	1.1	1.
6	1.2	1.
7	1.2	1.
8	0	1.
9	0	
10	0	
11	0	
12	0	
13	2.6	2.
14	3.1	3.
15	0	1.
16	1.2	1.
17	3.1	3.
18	1.1	
19	1.0	1.
20	0	
21	0.9	2.
22	0.8	
23	3.1	3.
24	1.0	2.
25	0.5	1.
26	0	
27	1.1	1.
28	1.2	1.
29	3.1	3.
30	1.2	1.
31	1.2	2.
32	3.0	3.
33	0	
34	2.6	2.
35	0	
36	0	
37	0	
38	1.5	1.
39	1.4	1.
40	1.2	1.
41	1.3	1.
42	1.2	1.
43	0.6	1.
44	1.0	1.
IC4003		
1	3.0	3.
2	2.8	2.
3	2.8	2.
4	3.1	3.

ODE N NO.	REC	PLAY
194	0	0
195	0	0
196	0	0
197	3.1	3.2
198	3.1	3.1
199	0	0
200	3.1	3.1
201	0	0
202	3.1	3.2
203	0	0
204	1.8	1.8
205	0	0
206	3.1	3.1
207	0	0
208	0	0
209	1.1	1.1
210	1.1	0
211	0.5	0
212	0.2	0
213	0	0
214	3.1	3.1
215	0	0
216	0	0
217	3.1	3.1
218	0	0
219	3.1	3.1
220	1.2	1.6
221	1.0	1.0
222	0	0
223	2.1	2.1
224	0	0
225	3.1	3.2
226	0	0
227	0	0
228	0	0
229	2.3	0
230	0	0
231	3.1	3.1
232	1.1	1.1
233	0	1.4
234	1.9	1.9
235	1.6	1.6
236	0	0
237	1.1	1.2
238	1.1	1.2
239	1.4	1.4
240	0	0
4002		
1	0	0
2	0	2.0
3	0.8	2.0
4	1.0	2.0
5	1.1	1.5
6	1.2	1.6
7	1.2	1.8
8	0	1.4
9	0	0
10	0	0
11	0	0
12	0	0
13	2.6	2.6
14	3.1	3.2
15	0	1.9
16	1.2	1.2
17	3.1	3.1
18	1.1	0
19	1.0	1.7
20	0	0
21	0.9	2.2
22	0.8	0
23	3.1	3.1
24	1.0	2.0
25	0.5	1.4
26	0	0
27	1.1	1.9
28	1.2	1.8
29	3.1	3.1
30	1.2	1.3
31	1.2	2.0
32	3.0	3.0
33	0	0
34	2.6	2.6
35	0	0
36	0	0
37	0	0
38	1.5	1.5
39	1.4	1.4
40	1.2	1.2
41	1.3	1.4
42	1.2	1.4
43	0.6	1.2
44	1.0	1.9
4003		
1	3.0	3.0
2	2.8	2.6
3	2.8	2.7
4	3.1	3.1

MODE PIN NO.	REC	PLAY
5	3.1	3.2
6	0	0
7	1.2	1.3
8	1.5	1.5
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	3.1	3.1
20	2.9	2.9
Q4001		
E	0	0
C	0.2	0.2
B	0	0

<V_OUT>

MODE PIN NO.	REC	PLAY
IC4702		
1	0	0
2	2.4	2.4
3	0	0
4	0	0
5	0	0
6	0	0
7	1.9	1.9
8	0	0
9	2.4	2.3
10	0	0
11	2.0	2.2
12	2.2	2.3
13	4.7	4.8
14	2.0	2.0
15	2.0	2.0
16	4.8	4.8
Q4701		
E	1.2	1.2
C	0	0
B	0.5	0.6
Q4702		
E	1.2	1.2
C	0	0
B	0.6	0.6

<F/Z/IRIS>

MODE PIN NO.	REC	PLAY
IC4201		
1	1.5	0.4
2	1.9	1.9
3	1.9	1.8
4	4.7	4.8
5	0.3	0.6
6	0.4	0.6
7	0	0
8	0	0
9	0.4	0.5
10	0.4	0.6
11	0	0
12	1.9	1.9
13	1.9	1.9
14	2.5	2.5
IC4202		
1	1.4	3.5
2	1.5	0.8
3	1.4	1.4
4	4.8	4.8
5	1.4	0
6	1.5	0.4
7	1.1	0
8	0.8	0.8
9	0.1	0.2
10	0.2	0.2
11	0	0
12	1.9	1.9
13	1.9	1.9
14	1.9	1.8
IC4501		
1	0	0
2	0.4	0.5
3	0.3	0.3
4	0	0
5	0.3	0.2
6	0	0
7	0.2	0.2
8	3.2	3.1
9	4.7	4.8
10	0.2	0.2
11	0	0
12	0.2	0.3
13	4.7	4.8
14	0.2	0.3
15	0	0
16	0.2	0.3
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0.8	0
23	4.7	4.8
24	-	0.2
25	0.2	0
26	0.7	0.2
27	4.7	4.8
28	1.4	0.2
29	0	0
30	-	0.2
31	0	0
32	0	0
33	0	0
34	0.4	0
35	3.0	3.0
36	1.5	1.5
37	1.4	1.3
38	3.1	3.1
Q4201		
E	0.2	0.2
C	1.3	1.3
B	0.8	0.8
Q4202		
E	0.9	2.7
C	4.8	4.8
B	0.7	3.5
Q4501		
E	0	0
C	3.7	3.4
B	0	0

<TG_CDS>

MODE PIN NO.	REC	PLAY
IC5201		
1	1.5	1.5
2	0	0
3	1.2	1.5
4	1.3	1.7
5	1.2	1.5
6	1.1	1.5
7	0.9	1.5
8	2.1	1.5
9	0.6	1.5
10	0.8	1.5
11	0.4	1.5
12	0.2	1.5
13	3.1	3.1
14	0	0
15	1.6	1.6
16	2.8	0.3
17	3.0	0
18	2.9	3.1
19	0	0
20	3.1	3.0
21	3.1	3.1
22	1.6	0.2
23	0.9	0.9
24	0	0
25	0	0
26	1.3	0.2
27	1.5	1.5
28	3.1	3.1
29	3.1	3.1
30	0	0
31	0	0
32	2.9	0
33	2.9	0
34	3.1	0
35	3.1	0
36	3.1	0
37	3.1	0
38	3.0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0.3	1.4
45	1.2	1.2
46	0.8	0.9
47	0	1.9
48	1.4	0
49	3.1	3.1
50	1.9	0
51	1.9	1.9
52	3.1	0
53	1.9	0
54	1.9	0
55	0	0
56	3.0	0
57	0	0
58	1.1	1.1
59	3.1	3.1
60	0.4	0
61	3.1	3.1
62	3.0	3.0
63	0.3	0.2
64	3.0	3.0
IC5202		
1	-7.4	14.9
2	-7.4	-7.4
3	-0.2	0
4	0	0
5	-0.2	14.9
6	0	0
7	0	0
8	3.1	0
9	0	0
10	3.1	0
11	0	0
12	2.9	0
13	3.1	0
14	2.9	0
15	0	0
16	0	14.9
17	-7.0	14.9
18	-7.0	0
19	0	0
20	14.9	14.9

<REG>

MODE PIN NO.	REC	PLAY
IC6001		
1	3.1	3.1
2	3.0	3.1
3	3.1	3.1
4	0	0
5	3.1	3.1
6	0	0
7	1.3	1.2
8	11.0	11.0
9	1.0	1.0
10	1.2	1.2
11	2.1	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0.1	0
18	0	0
19	2.2	2.1
20	1.0	1.0
21	0	0
22	2.1	2.2
23	0.9	0.9
24	0.6	0.6
25	0.9	1.0
26	0.5	0.4
27	1.0	1.0
28	0.7	0.7
29	1.0	1.0
30	0.6	0.4
31	0.3	0.3
32	0.2	0.2
33	0.6	0.5
34	0.1	0.1
35	0.1	0.2
36	0.5	0.5
37	0.8	0.8
38	0	0
39	0	0
40	0	0
41	0	2.4
42	0	1.1
43	0	0
44	2.1	2.1
45	2.2	2.1
46	2.1	2.1
47	0	0
48	0	0
49	2.2	2.1
50	0	0
51	11.0	11.0
52	0	0
53	0	9.3
54	0	8.2
55	7.9	7.9
56	6.1	6.2
57	0	9.2
58	7.8	7.8
59	0	0
60	11.0	11.0
61	0	0
62	10.3	10.2
63	1.2	1.2
64	1.0	1.0
Q6101		
1	0	0
2	11.0	11.0
3	7.8	7.8
4	2.9	2.9
5	0	0
6	2.9	2.9
Q6201		
1	0	0
2	11.0	11.0
3	9.2	9.2
4	1.6	1.6
5	0	0
6	1.6	1.6
Q6301		
1	6.1	6.2
2	11.0	11.0
3	7.8	7.9
4	-0.2	-0.1
5	11.0	11.0
6	4.5	4.5
Q6401		
1	0	0
2	11.0	11.0
3	8.1	8.2
4	2.6	2.7
5	0	0
6	2.6	2.6
Q6501		
1	0	0
2	11.0	11.0
3	9.3	9.3

MODE PIN NO.	REC	PLAY
4	1.3	1.4
5	0	0
6	1.3	1.3
Q6604		
E	0	0
C	14.9	14.9
B	-1.0	-1.1
Q6701		
1	0	0
2	0	0
3	11.0	11.0
4	11.0	11.1
5	0	0
6	0	0
Q6702		
E	0	0
C	0	0
B	0	0
Q6802		
E	10.4	10.4
C	3.1	3.1
B	10.9	11.0
Q6803		
E	3.1	3.1
C	3.1	3.1
B	0	0

<LCD CTL>

MODE PIN NO.	REC	PLAY
Q7001	-	-
Q7002	-	-
Q7003		
1	0.9	0.8
2	1.3	1.3
3	4.8	4.8
4	2.2	2.2
5	2.8	2.8
6	2.8	2.8

<MONITOR>

MODE PIN NO.	REC	PLAY
IC7604		
1	3.1	3.1
2	3.1	3.1
3	0	0
Q7501		
E	0.4	0.4
C	4.4	4.4
B	0	0
Q7502		
E	0.4	0.4
C	4.4	4.4
B	0	0
Q7503		
E	4.5	4.5
C	4.4	4.4
B	0	0
Q7504		
E	0	0
C	0	0
B	3.1	3.1

<BWVF_CTL>

MODE PIN NO.	REC	PLAY
IC7301		
1	1.2	1.2
2	0	0
3	1.9	1.9
4	0	0
5	0	0.9
6	1.2	1.2
7	0	0
8	0	0
9	0	0
10	3.1	3.1
11	0	0
12	0.2	0.5
13	0	0
14	0	0
15	3.1	3.1
16	3.1	3.1
17	3.1	3.0
18	0	0
19	0	0
20	3.1	3.2
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	1.0	1.0
27	1.0	1.0
28	0	0
29	0	0
30	0	0
31	1.6	0.1
32	0	0
33	0	3.1
34	0.3	0.6
35	0	0
36	0.2	0.6
37	3.1	3.1
38	3.1	3.1
39	0	3.1
40	0	0
41	0	0
42	0	0
43	3.1	3.1
44	3.1	3.1
45	1.4	1.6
46	1.6	1.6
47	0	0
48	0.3	0.7
IC7302	-	-
Q7301		
E	0.6	0.6
C	0	0
B	0	0
Q7302		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	3.1	3.1

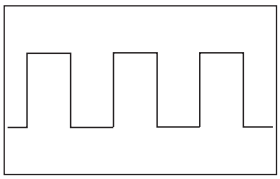
<CCD>

MODE PIN NO.	EE
IC5301	
1	-7.0
2	-7.0
3	-0.3
4	-0.2
5	0
6	0
7	10.7
8	14.9
9	0
10	10.2
11	-7.4
12	12.6
13	1.5
14	1.3
Q5301	
E	9.9
C	14.9
B	10.6

■ WAVEFORMS

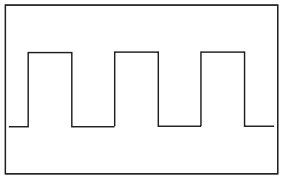
— CPU —

WF1 IC101-109



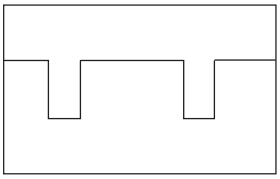
REC/PB 3.2 Vp-p
1.0V / 0.5msec /DIV

WF2 IC101-111



REC/PB 3.2 Vp-p
1.0V/ 0.2msec /DIV

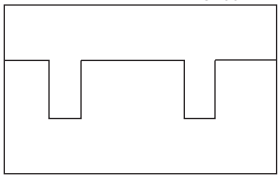
WF3 IC101-113



REC/PB 3.2 Vp-p
1.0V / 5msec /DIV

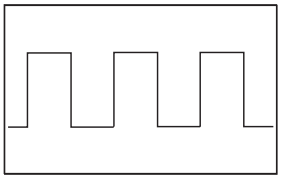
— MDA —

WF1 IC1601-14



REC/PB 3.2 Vp-p
1.0V / 5msec /DIV

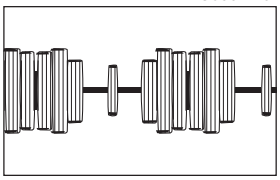
WF2 IC1601-49



REC/PB 3.2 Vp-p
1.0V/ 0.2msec /DIV

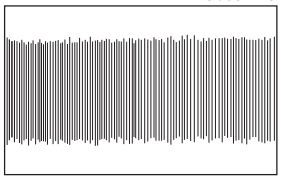
— VTR ASP —

WF1 IC3501-19



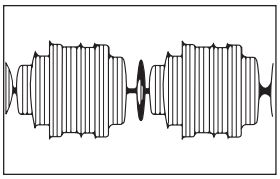
REC 0.4 Vp-p
0.2V / 1msec /DIV

WF2 IC3501-20



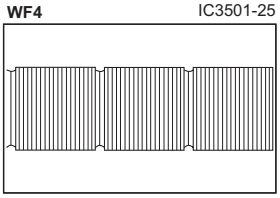
REC 1.2 Vp-p
0.5V / 1µsec /DIV

WF3 IC3501-21



PB 0.15 Vp-p
50mV / 20µsec /DIV

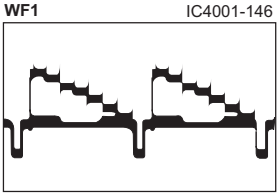
WF4 IC3501-25



PB 1.0 Vp-p
0.5V / 2µsec /DIV

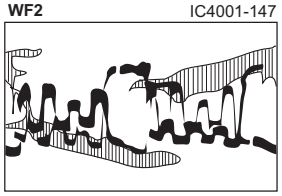
— DSP(VTR/CAM) —

WF1 IC4001-146



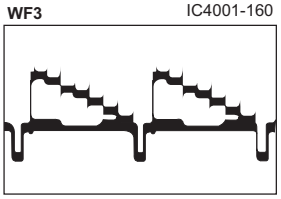
REC/PB 1.4 Vp-p
0.5V / 20µsec /DIV

WF2 IC4001-147



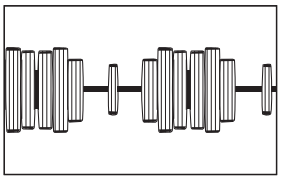
REC 0.6 Vp-p
0.2V / 20µsec /DIV

WF3 IC4001-160



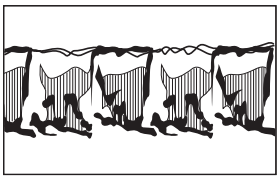
REC/PB 1.5 Vp-p
0.5V / 20µsec /DIV

WF4 IC4001-161



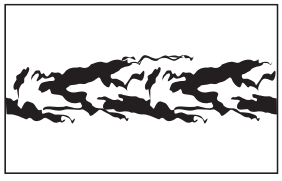
REC/PB 1.0 Vp-p
0.5V / 10µsec /DIV

WF5 IC4001-168



REC/PB 1.8 Vp-p
0.5V / 20µsec /DIV

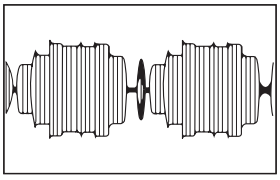
WF6 IC4001-169



REC/PB 1.0 Vp-p
0.5V / 20µsec /DIV

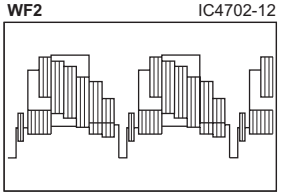
— V_OUT —

WF1 IC4702-9



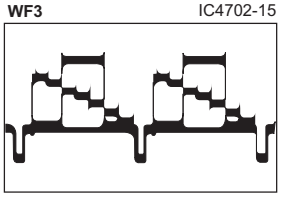
REC/PB 1.8 Vp-p
0.5V / 20µsec /DIV

WF2 IC4702-12



REC/PB 3.0 Vp-p
1.0V / 20µsec /DIV

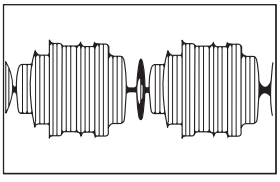
WF3 IC4702-15



REC/PB 2.4 Vp-p
1.0V / 20µsec /DIV

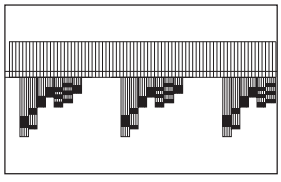
— TG_CDS —

WF1 IC5201-44



PB 0.1 Vp-p
50mV / 2µsec /DIV

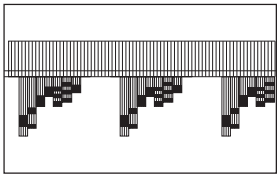
WF2 IC5201-51



REC 1.2 Vp-p
0.5V / 2µsec /DIV

— CCD —

WF1 Q5301-B



EE 1.0 Vp-p
0.5V / 20µsec /DIV

JVC
Victor Company of Japan, Limited
Camcorder Category 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YF126)

Printed in Japan
VPT

PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

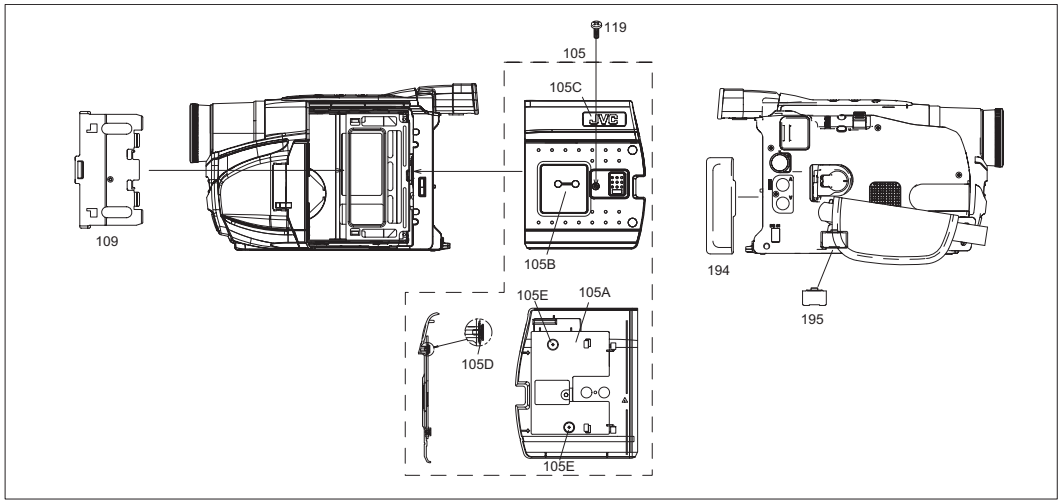
BEWARE OF BOGUS PARTS

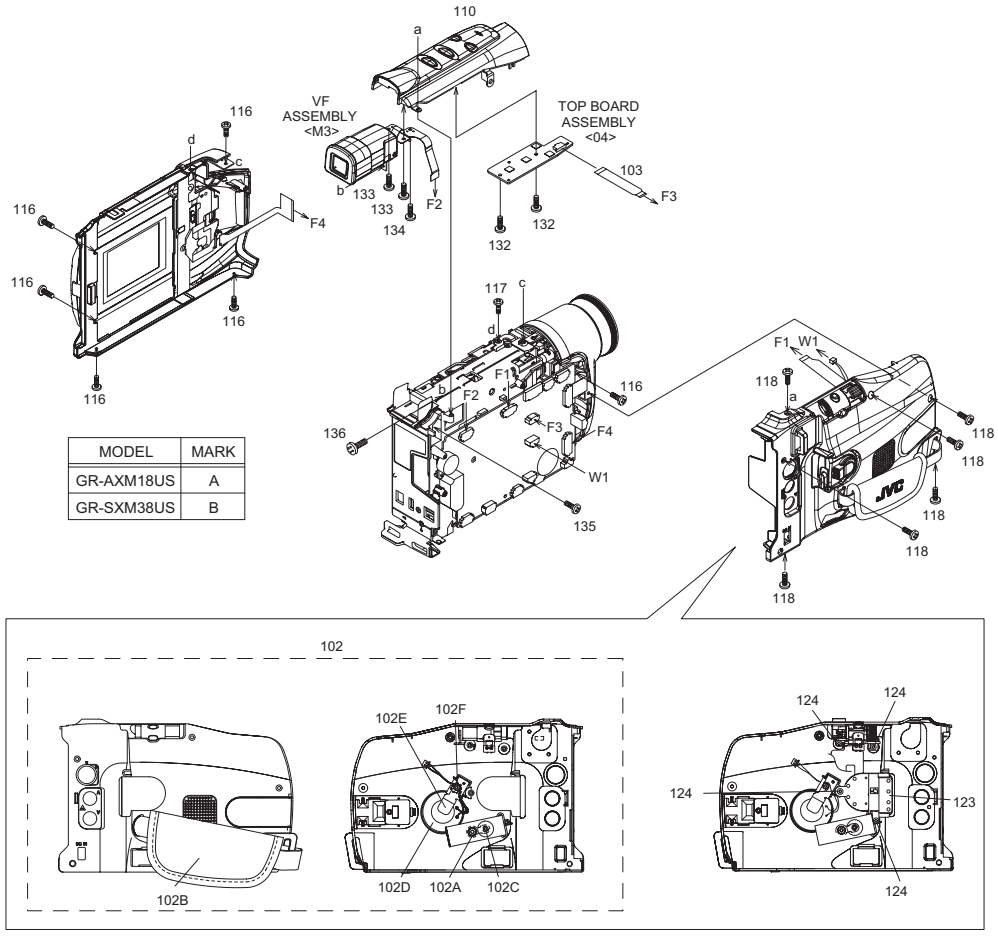
Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

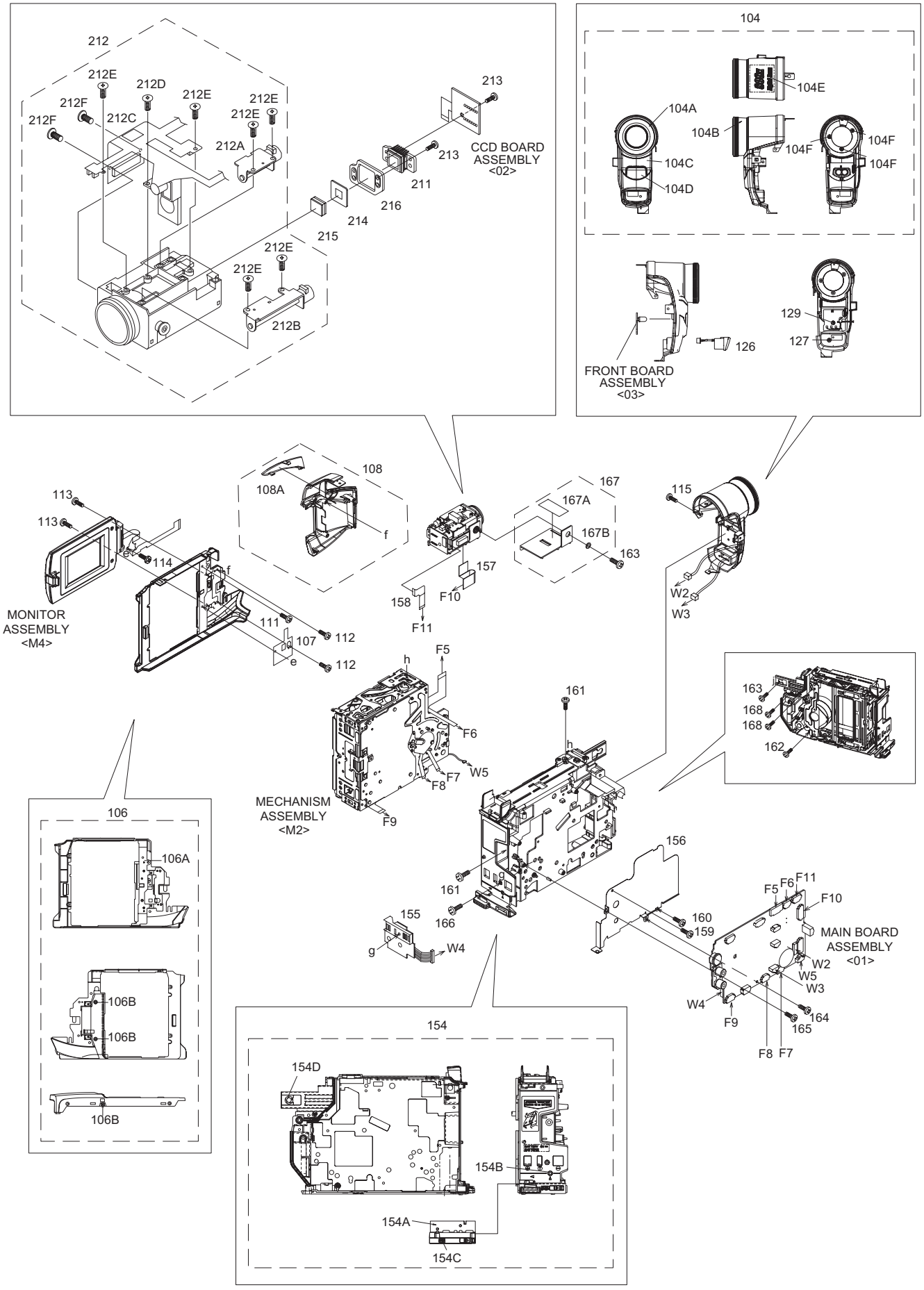
1. EXPLODED VIEW

1.1 FINAL ASSEMBLY<M1>

The instruction manual to be provided with this product will differ according to the destination.






212
212E
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212F
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212C
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213
CCD BOARD
ASSEMBLY
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212E
212B
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104C
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ASSEMBLY
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ASSEMBLY
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F5
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F10
MAIN BOARD
ASSEMBLY
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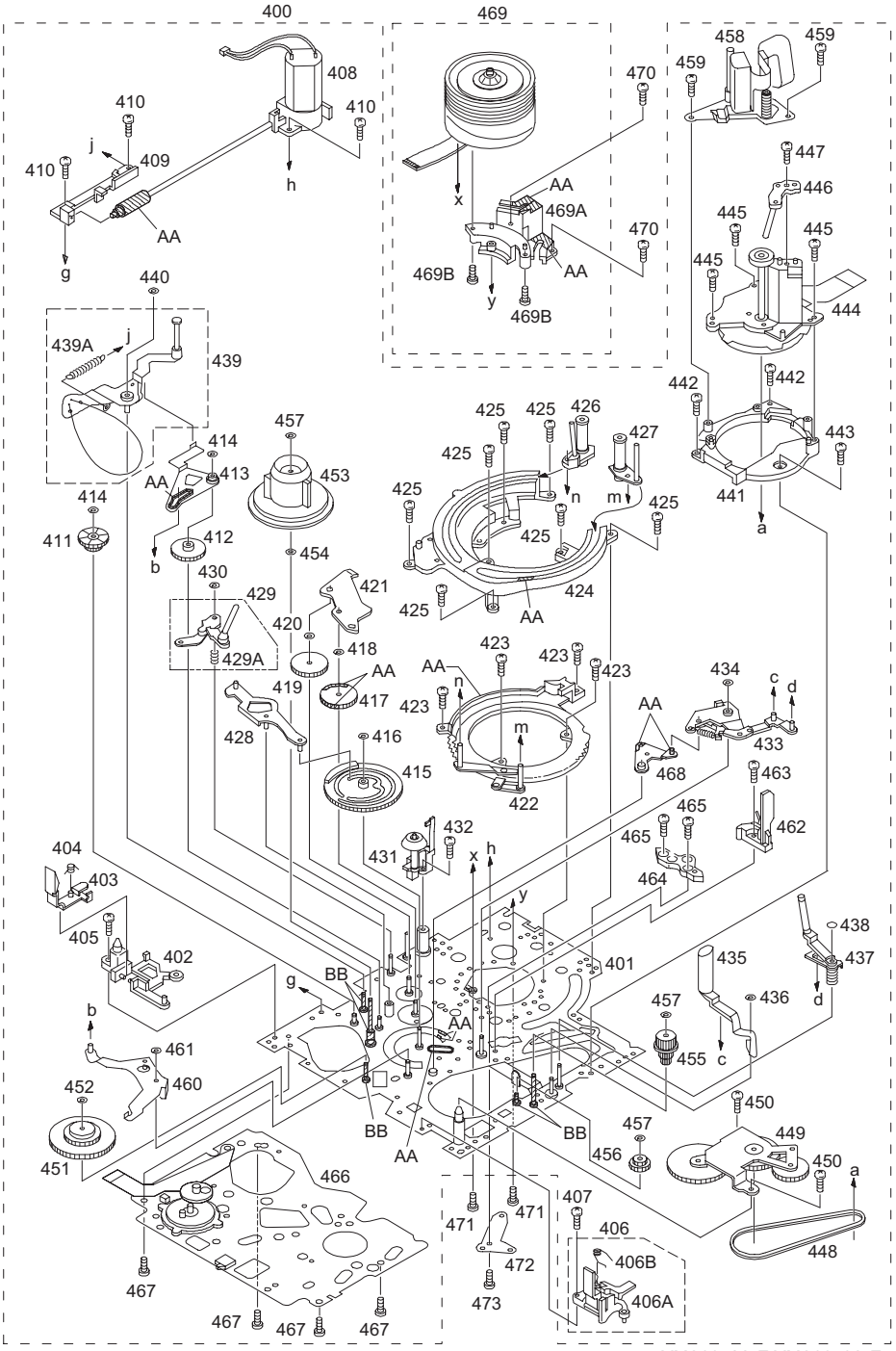
W3
W4
F9
164
165
F8
F7
154
154D
154B
154A
154C

1.2 MECHANISM ASSEMBLY<M2>

BEWARE OF BOGUS PARTS

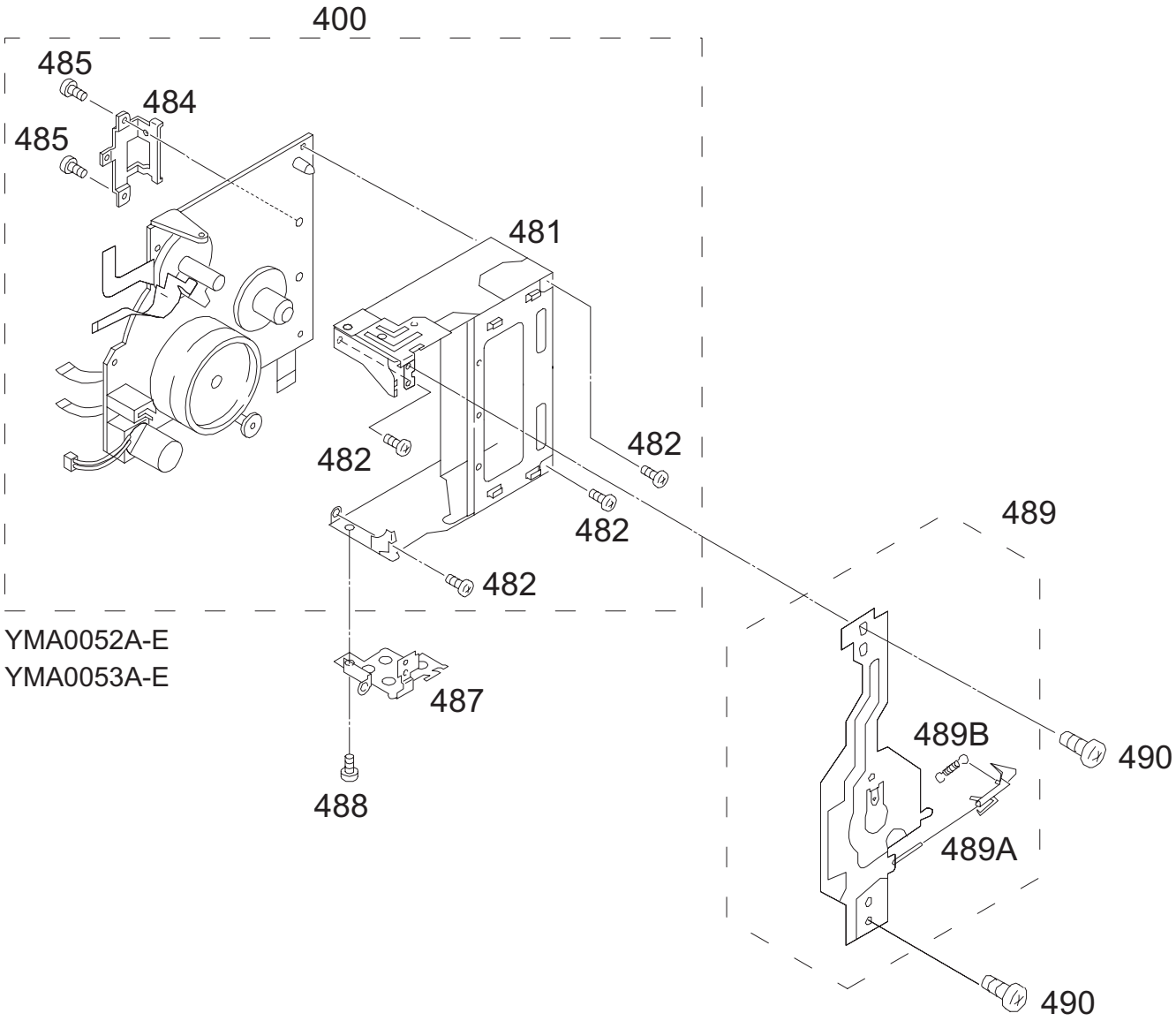
Parts that do not meet specifications may cause trouble in regard to safety and performance.We recommend that genuine JVC parts be used.



YMA0052A-E,YMA0053A-E

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JP	AA
Oil	YTU94027	BB

NOTE: The section marked in AA and BB indicate lubrication and greasing areas


400
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482
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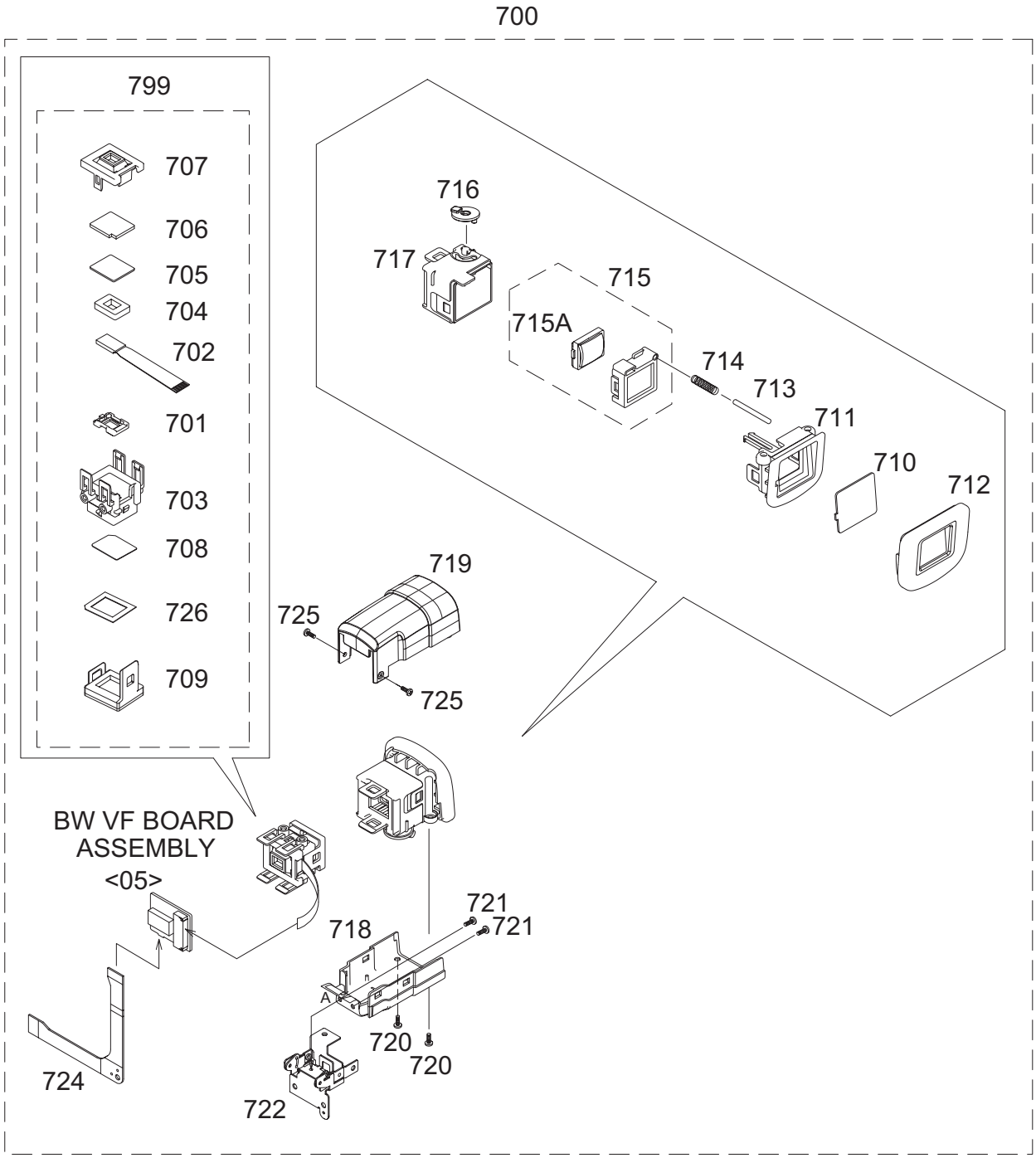
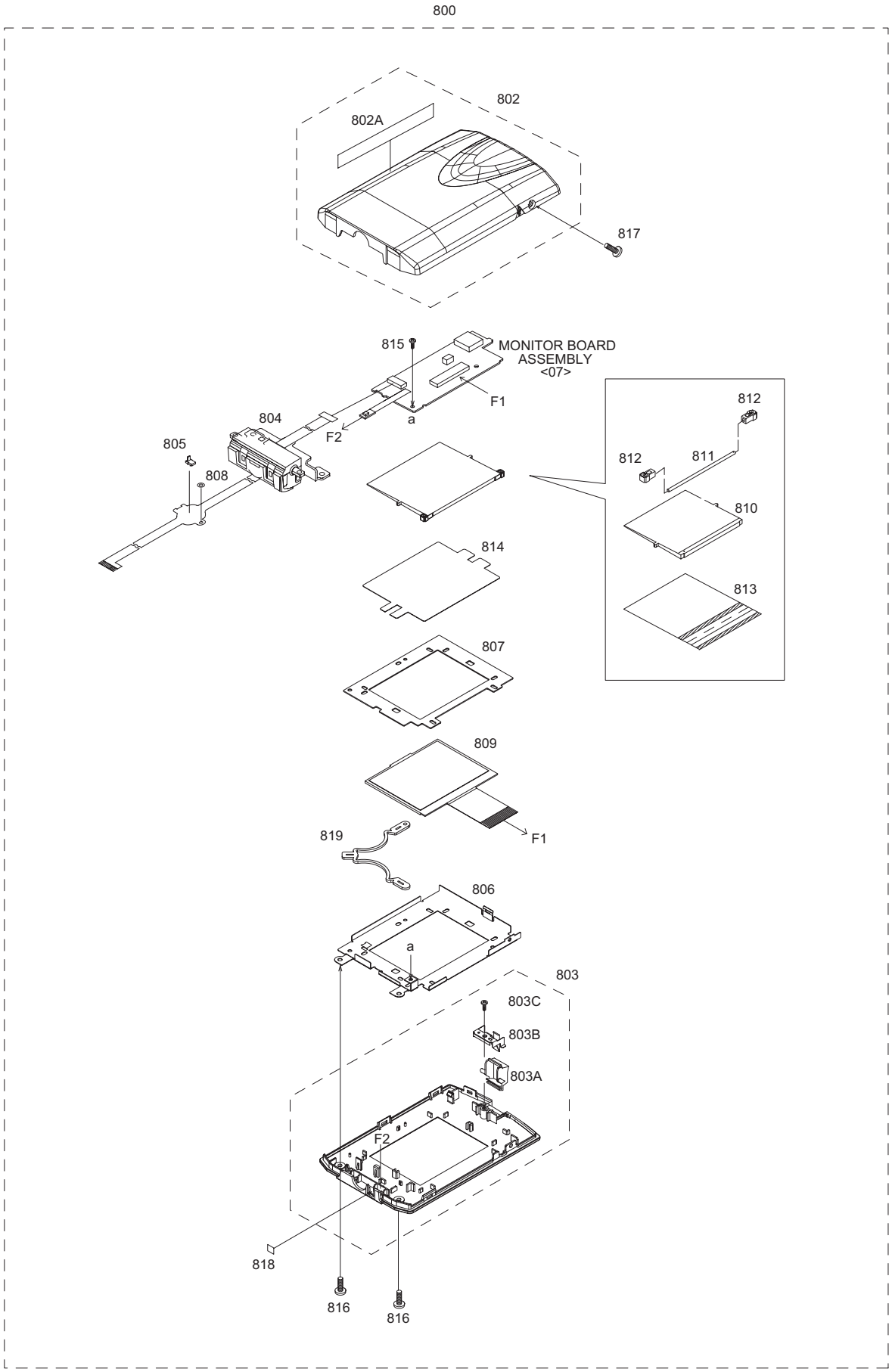
YMA0052A-E
YMA0053A-E
487
488
489B
490
489A
490

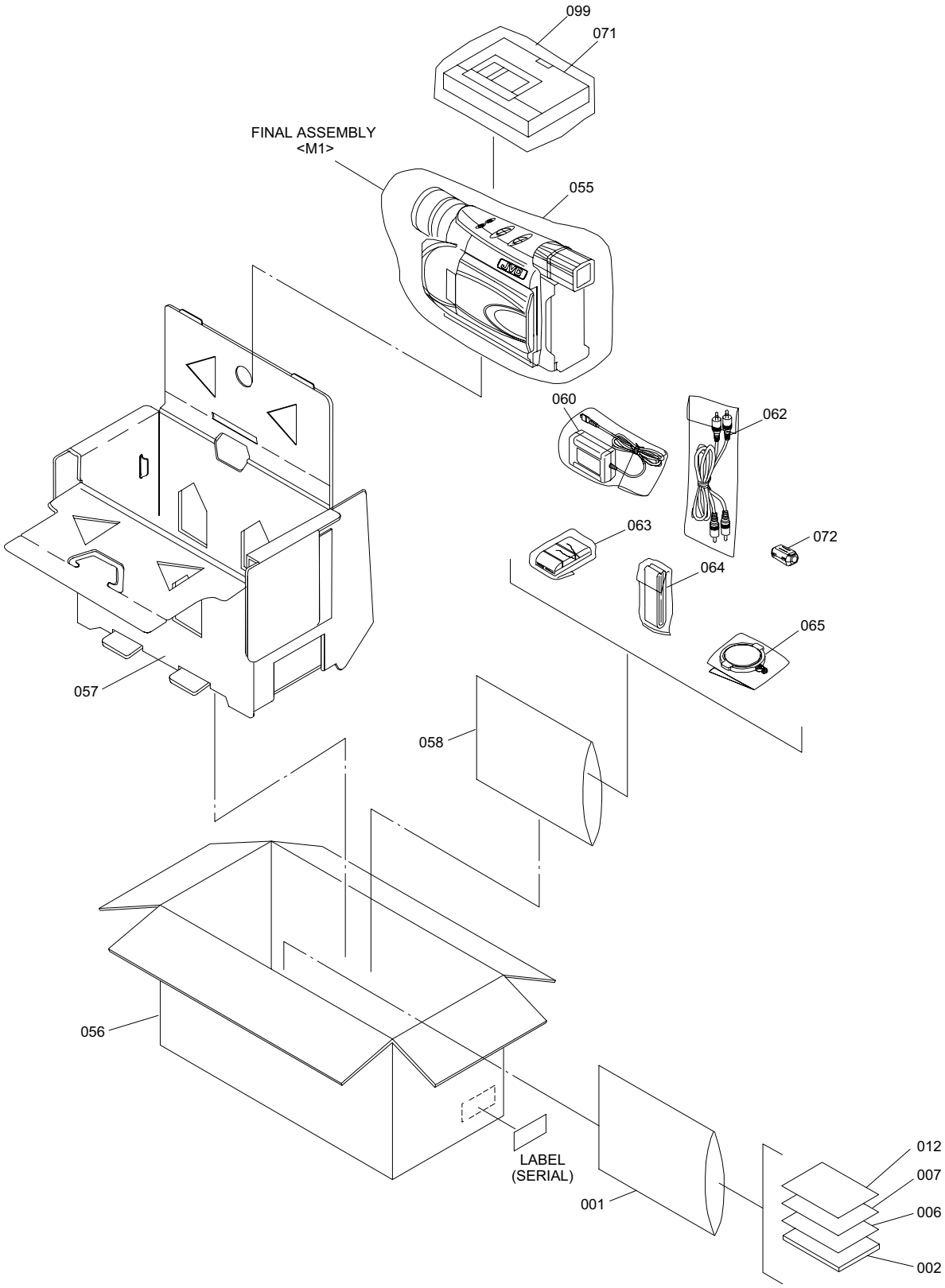
1.3 VF ASSEMBLY <M3>



1.4 MONITOR ASSEMBLY <M4>



1.5 PACKING AND ACCESSORY ASSEMBLY <M5>



MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

2. PARTS LIST

FINAL ASSEMBLY <M1>

⚠ Symbol No.	Part No.	Part Name	Description	Local
⚠ 102	LY20925-033A	LOWER CASE ASSY		A
⚠ 102	LY20925-032A	LOWER CASE ASSY		B
102A	LY40081-001A	CAP		
102B	LY20682-001B	GRIP BELT		
102C	LY30031-018A	SPECIAL SCREW	LOW-BELT	
102D	QAS0158-001	SPEAKER		
102E	LY42764-001C	HOLDER(SPEAKER)		
102F	QYSLSF2050ZA	TAP SCREW	LOW-HLDR(S) M2 x 5mm	
103	QUQK05-0607AA-E	FFC WIRE	6pin 7cm	
⚠ 104	LY21314-010B	F.COVER ASSY		A
⚠ 104	LY21314-009B	F.COVER ASSY		B
104A	LY34514-002A	HOOD		A
104A	LY34514-001A	HOOD		B
104B	LY34515-001C	COVER (HOOD)		
104C	LY34517-008A	ORNAMENT(FRONT)		A
104C	LY34517-007A	ORNAMENT(FRONT)		B
104D	LY34516-001A	LED COVER		B
104E	LY45014-001A	STICKER (F)		A
104E	LY45014-002A	STICKER (F)		B
104F	QYSLSF2060ZA	TAP SCREW	M2 x 6mm(x3)	
105	LY20927-015C	C.COVER(M) ASSY		
105A	LY32952-001A	P.PLATE(M)		
105B	LY44923-001B	LABEL(CAUTION)		
105C	LY42883-001B	MARK		
105D	LY43336-001A	SPRING		
105E	LY30031-019A	SPECIAL SCREW	(x2)	
⚠ 106	LY20950-002J	UPPER CASE(M)ASSY		
106A	LY20918-001D	BRACKET(MON.)		
106B	QYSLSP2020ZA	SCREW	M2 x 2mm(x3)	
107	LY43942-001B	SHEET(FPC)		
108	LY34518-006A	COV.(UPPER/M)ASSY		A
108	LY34518-005A	COV.(UPPER/M)ASSY		B
108A	LY21315-002A	ORNAMENT(UPPER)		
109	LY32953-002A	C.COVER INSIDE		
110	LY34646-001D	TOP COVER ASSY		
111	QYSLSF2040RA	TAP SCREW	C.UPP-BKT M2 x 4mm	
112	QYSLSF2060ZA	TAP SCREW	COV UPPER M2 x 6mm(x2)	
113	LY30031-020A	SPECIAL SCREW	HING-BKT(x2)	
114	QYSLSP2030ZA	SCREW	M.FPC-BKT M2 x 3mm	
115	QYSLSF2060DA	TAP SCREW	FRONT-FRM M2 x 6mm	
116	QYSLSF2060DA	TAP SCREW	UPPER-FRM M2 x 6mm(x6)	
117	QYSLSP2030ZA	SCREW	UPPER-FRM M2 x 3mm	
118	QYSLSF2060DA	TAP SCREW	LOWER-FRM M2 x 6mm(x6)	
119	QYSLSF2060DA	TAP SCREW	C.COV-INSD M2 x 6mm	
⚠ 123	LY10393-002E	ZOOM UNIT		
124	QYSLSF2050ZA	TAP SCREW	ZOOM-LOWER M2 x 5mm(x4)	
126	LY34383-001A	MIC		
127	QYSLSF2060ZA	TAP SCREW	FRONT-MIC M2 x 6mm	
129	QYSLSF2060ZA	TAP SCREW	FRONT-LED M2 x 6mm	B
132	QYSLSF2050ZA	TAP SCREW	TOP PWB M2 x 5mm(x2)	
133	QYSLSF2050ZA	TAP SCREW	TOP-BKTVF M2 x 5mm(x2)	
134	QYSLSF2050ZA	TAP SCREW	TOP-VF FPC M2 x 5mm	
135	QYSLSF2060DA	TAP SCREW	FRM-BKTVF M2 x 6mm	
136	LY30031-036A	SPECIAL SCREW	FRM-BKTVF	
⚠ 154	LY21316-001F	FRAME ASSY		
154A	LY32973-001B	HOLDER(KNOB)		
154B	QYSLSF2060ZA	TAP SCREW	M2 x 6mm	
154C	LY30002-053A	COMPRES. SPRING		
154D	LY44810-001A	RUBBER(OP)		
155	LY33749-002A	REAR BOARD ASSY		
156	LY32966-001D	S.CASE(MAIN)		
157	WJT0170-002A-E	E-CARD WIRE		
158	QAL0450-002	FPC	FOR CCD	
159	QYSPSPU1720ZA	SCREW	SHLD-MECHA M1.7 x 2mm	
160	QYSPSTU1725MA	TAP SCREW	SHLD-MECHA M1.7 x 2.5mm	
161	LY30032-004A	SPECIAL SCREW	FRM-MECHA(x2)	
162	QYSLSF1750DA	TAP SCREW	MECHA-FRM M1.7 x 5mm	
163	LY30031-011A	SPECIAL SCREW	OP-FRM(x2)	
164	QYSLSF2060DA	TAP SCREW	M.PWB-FRM M2 x 6mm	
165	QYSLSF2060DA	TAP SCREW	JACK-FRM M2 x 6mm	
166	QYSLSF2060DA	TAP SCREW	M2 x 6mm	
167	LY34649-001B	BRACKET OP ASSY		
167A	LY44817-001A	CUSHION(OP)		
167B	LY44810-001A	RUBBER(OP)		
168	QYSLSF2060DA	TAP SCREW	BKT(OP)-FR M2 x 6mm(x2)	
194	LY31945-005A	COVER(JACK)		
⚠ 195	LY32955-003A	COVER(JIG)		
211	LYH30596-002A	CCD BASE ASSY		
212	LY34620-004A	OP BLOCK ASSY		
212A	PTY34620-002	FOCUS MOTOR UNIT		
212B	PTY34620-001	ZOOM MOTOR UNIT		
212C	PTY34620-006	AUTO IRIS UNIT		
212D	PTY34620-535	TAP SCREW		
212E	PTY34620-530	TAP SCREW	(x6)	
212F	PTY34620-525	TAP SCREW	(x2)	
213	LY30031-038A	SPECIAL SCREW	(x2)	
214	LY44887-001A	SHEET		
215	LY44004-001A	OP LPF		
216	LY34621-001A	SPACER		

MECHANISM ASSEMBLY <M2>

⚠ Symbol No.	Part No.	Part Name	Description	Local
400	YMA0052A-E	MECHA(B) ASSY	OL-Y08492	A
400	YMA0053A-E	MECHA(B) ASSY	OL-Y08492	B
401	LY20612-004B	MAIN DECK ASSY		
402	LY31817-001A	CASSETTE GUIDE (L)		
403	LY31815-001A	SW LEVER (L)		
404	LY42581-001A	TORSION SPRING		
405	LY42722-004A	TAPPING SCREW		
406	YQ44339A-7	C.GUIDE(R)ASSY		B
406A	YQ32162-1-3	SW.LEVER(R)		B
406B	YQ44340-1-4	TORSION SPRING		B
407	LY42819-002A	TAPPING SCREW		B
408	LY31826-002A	MOTOR BRACKET ASSY		
409	LY20951-001A	WORM BRACKET		
410	LY42722-004A	TAPPING SCREW	(x3)	
411	LY31925-001A	WHEEL GEAR		
412	LY42730-001A	MIDDLE GEAR		
413	LY42521-002A	CANCEL LEVER ASSY		
414	LY42754-003A	SLIT WASHER	(x2)	
415	YQ20827-2-1	CONTROL CAM		
416	PQM30017-25	SLIT WASHER		
417	LY42733-002A	LOADING GEAR(T)ASSY		
418	LY42754-003A	SLIT WASHER		
419	LY42732-002A	LOADING GEAR(S)ASSY		
420	LY42754-003A	SLIT WASHER		
421	LY42403-001A	COVER PLATE		
422	LY42452-003A	LOADING RING ASSY		
423	LY42728-002A	TAPPING SCREW	(x4)	
424	LY10239-001A	GUIDE RAIL		
425	LY42728-002A	TAPPING SCREW	(x7)	
426	LY30161-001B	POLE BASE(S)ASSY		
427	LY30162-002A	POLE BASE(T)ASSY		
428	LY42523-003A	DRIVE LEVER ASSY		
429	LY44000-002A	SLANT ARM ASSY		
429A	LY43992-001A	TORSION SPRING(S)		
430	LY42754-003A	SLIT WASHER		
431	LY42739-003A	ROLLER BASE ASSY		
432	LY42722-004A	TAPPING SCREW		
433	LY42494-002B	LINK ARM ASSY		
434	PQM30017-25	SLIT WASHER		
435	LY45002-001A	PINCH ROLLER ARM ASSY		
436	PQM30017-25	SLIT WASHER		
437	LY42541-001C	TAKE UP GUIDE ARM ASSY		
438	LY42754-003A	SLIT WASHER		
439	LY42571-002A	TENSION ARM ASSY		
439A	LY42669-001A	TENSION SPRING		
440	LY42754-003A	SLIT WASHER		
441	YQ20797-1-5	MOTOR BASE		
442	LY42722-004A	TAPPING SCREW	(x2)	
443	YQ44460-2	TAPPING SCREW		
444	QAR0211-004	CAPSTAN MOTOR		
445	YQ44304-2	TAPPING SCREW	(x3)	
446	LY42731-001A	SLANT POLE BASE ASSY		
447	YQ44304-2	TAPPING SCREW		
448	YQ43710-2	TIMING BELT		

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

⚠ Symbol No.	Part No.	Part Name	Description	Local
449	LY42678-004A	CENTER PULLEY UNIT		
450	LY42722-005A	TAPPING SCREW	(x2)	
451	LY42670-001A	SUPPLY CLUTCH ASSY		
452	LY42754-003A	SLIT WASHER		
453	YQ31861-1-7	REEL DISC		
454	LY42755-001A	WASHER		
455	LY31924-002A	TAKE UP GEAR		
456	LY42738-001A	BRAKE SUB GEAR		
457	LY42754-003A	SLIT WASHER	(x3)	
458	LY33747-001A	A/C HEAD UNIT		
459	QYSPSGU1750ZA	TAP SCREW	M1.7 x 5mm(x2)	
460	LY42517-003A	EJECT LEVER ASSY		
461	LY42754-003A	SLIT WASHER		
462	YQ31833-1-1	LED GUIDE		
463	LY42722-004A	TAPPING SCREW		
464	LY42729-001A	DRUM SPACER		
465	LY42722-004A	TAPPING SCREW	(x2)	
466	QSW1179-002	ROTARY ENCODER		A
466	QSW1179-001	ROTARY ENCODER		B
467	LY42722-005A	TAPPING SCREW	(x4)	
468	LY31814-002A	LINK LEVER		
469	YDV2098G-CX	DRUM ASSY	JVC ONLY	
469A	LY10342-001A	CATCHER		
469B	QYSPSPU1735MA	SCREW	(x2)	
470	LY42722-004A	TAP SCREW	(x2)	
471	QYSPSPU1740ZA	SCREW	M1.7 x 4mm(x2)	
472	YU42051	BRUSH		
473	LY42722-006A	TAP SCREW		
481	LY31808-007B	CASSETTE HOUSING FINAL ASSY		
482	LY42722-006A	TAP SCREW	(x4)	
484	LY32326-002A	BRACKET(MECHA)		
485	LY42722-006A	TAP SCREW	(x2)	
487	LY31807-002A	SIDE BRACKET L		
488	LY42722-006A	TAP SCREW		
489	LY44193-002A	F.FRAME SA		
489A	LY33428-001B	TAPE GUIDE		
489B	LY44176-002A	TENSION SPRING		
490	QYSPSPU1725ZA	SCREW	M1.7 x 2.5mm(x2)	

VF ASSEMBLY <M3>

⚠ Symbol No.	Part No.	Part Name	Description	Local
700	VU06C01A	V.UNIT ASSY	FOR JAPAN	
701	LY34584-001C	GUIDE(LCD)		
702	QLD0358-001	LCD MODULE		
703	LY21330-001B	HOLDER(LCD)		
704	LY44848-001B	CUSHION(LCD)		
705	LY44844-001A	SHEET(POLA.1)		
706	LY44846-001A	SHEET(DIFF)		
707	LY34590-001C	CASE(B.LIGHT)		
708	LY44845-001A	SHEET(POLA.2)		
709	LY34591-001A	STOPER(POLA)		
710	LY44843-001B	SHEET(LENS)		
711	LY21333-001C	HOLDER(EYE)		
712	LY34589-001B	EYE CUP		
713	LY44847-001A	SHAFT(VF)		
714	LY30002-055A	COMPRES. SPRING		
715	LY44841-001D	LENS ASSY		
715A	LY44842-001B	LENS(VF)		
716	LY34593-001C	LEVER(VF)		
717	LY21332-001C	GUIDE(LENS)		
718	LY21336-001B	B.CASE(VF)		
719	LY21337-001B	U.CASE(VF)		
720	QYSLSF1750DA	TAP SCREW	M1.7 x 5mm(x2)	
721	LY30031-001A	SPECIAL SCREW	BKT-B.CASE(x2)	
722	LY34642-001B	VF BRACKET ASSY		
724	QAL0649-002	FPC	TO MAIN	
725	LY30031-016A	SPECIAL SCREW	BKT-U.CASE(x2)	
726	LY45163-001A	CUSHION(POLA)		
799	LY34844-002E	LCD UNIT ASSY		

MONITOR ASSEMBLY <M4>

⚠ Symbol No.	Part No.	Part Name	Description	Local
⚠ 800	LY34550-004C	MONITOR ASSY		A
⚠ 800	LY34550-003C	MONITOR ASSY		B
⚠ 802	LY34520-011A	M.COVER ASSY		A
⚠ 802	LY34520-010A	M.COVER ASSY		B
802A	LY44908-003A	STICKER (M)		A
802A	LY44908-002A	STICKER (M)		B
803	LY34521-001C	M.CASE ASSY		
803A	LY32967-001B	KNOB(LOCK)		
803B	LY32988-001A	LOCK SPRING		
803C	QYSLSF2050ZA	TAP SCREW	M2 x 5mm	
804	LY35000-001B	MON.HINGE ASSY		
805	NSW0245-001X	LEVER SWITCH		
806	LY21317-001B	S.CASE(2.5)		
807	LY44811-001B	FRAME(LCD)		
808	LY44159-001A	WASHER		
809	QLD0345-001	LCD MODULE		
810	LY44832-001A	LIGHT SCREEN		
811	QLL0168-001	LAMP		
812	LY44850-001A	HOLDER(LAMP)	(x2)	
813	LY44833-001A	SHEET(REFLECT)		
814	LY44812-001B	DIFF.SHEET(2.5)		
815	LY30033-002A	SPE.SCREW(W)	MON.PWB	
816	QYSLSF2060DA	TAP SCREW	MON.CV-CAS M2 x 6mm(x2)	
817	QYSLSP2030ZA	SCREW	MON.CV-CAS M2 x 3mm	
818	LY44129-001A	SHEET(M.SENSOR)		
819	LY34522-001A	SPRING(LCD)		

PACKING AND ACCESSORY ASSEMBLY <M5>

⚠ Symbol No.	Part No.	Part Name	Description	Local
001	LY34452-001A	POLY BAG	DOCUMENT	
⚠ 002	LYT1519-001A	INST BOOK(EN)	(ENGLISH)	A
⚠ 002	LYT1518-001A	INST BOOK(EN)	(ENGLISH)	B
006	----------	WARRANTY CARD	BT-51005-9	
007	BT-51034-2	REGI. CARD		
012	LYT1518-002A	SHEET(CORE)		B
055	QPC03003540P	POLY BAG	30cm x 35cm	
056	LY35287-002A	PACKING CASE	FOR JVM	A
056	LY35287-004A	PACKING CASE	FOR JVM	B
057	LY34612-001B	CUSHION		
058	LY34452-001A	POLY BAG	ACCESSORY	
⚠ 060	LY21103-001D	AC ADAPTER	AP-V14U	
062	QAM0511-001	A/V CABLE		A
⚠ 063	LY10481-001B	BATTERY PACK ASSY	BN-V10U	
064	LY20186-008A	SHOULDER STRAP		
065	LY44924-001B	LENS CAP ASSY		
071	YQ31963Q	C.ADAPTER ASSY		B
072	QQR0491-002	FERRITE CORE	TDK (BLACK)	B
099	YQ43446	POLY BAG		B

MAIN BOARD ASSEMBLY <01>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA10022-11C1	MAIN BOARD ASSY		A
PW1	LYA10022-10C1	MAIN BOARD ASSY		B
IC101	UPD703039-064-A	IC(MICRO C ROM)	FLASH	
IC102	25LC160-I/SN-X	IC		
IC102 or	CAT25C16SI-X	IC		
IC103	RS5C314-X	IC		
IC104	BD4827FVE-W	IC		
⚠ IC1601	BD6637KV	IC	MDA_IC	
IC2001	MC74AC04DT-X	IC		
IC2001 or	TC74AC04FT-X	IC(DIGITAL)		
IC2401	NJM2149V-X	IC		
IC3501	HA118224F	IC		
IC4001	JCY0184	IC	CAM&VTRDSP	
IC4003	UPD6467GR-567-X	IC(MICRO C ROM)		
IC4201	BA10324AF-XE	IC		

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC4201	or LM324ADR-X	IC		
IC4201	or S324-X	IC		
IC4202	BA10324AF-XE	IC		
IC4202	or LM324ADR-X	IC		
IC4202	or S324-X	IC		
IC4501	UPD16835AGS-X	IC		
IC4701	NJM2562F1-X	IC	N ONLY	A
IC4702	BA7665FS-X	IC	S ONLY	B
IC4702	or BA7665AFS-X	IC	S ONLY	B
IC5201	HD49335F	IC		
IC5202	MN31121SAS-X	IC		
IC6001	FA3698F	IC		
IC7301	KCD-A300-QB	IC		
IC7302	SN74AHC1G08K-X	IC		
IC7302	or SN74AHC1G08DC-X	IC(DIGITAL)		
IC7302	or TC7SH08FU-X	IC(DIGITAL)		
Q101	or 2SB1462J/RS/-X	TRANSISTOR	UNREG	
Q101	or BC857BT-X	TRANSISTOR	UNREG	
Q102	DTC144EE-X	DIGI TRANSISTOR	P_ON	
Q102	or UN9213J-X	DIGI TRANSISTOR	P_ON	
Q102	or PDTC144EE-X	DIGI TRANSISTOR	P_ON	
Q102	or BCR148T-X	DIGI TRANSISTOR	P_ON	
Q103	2SC4617/QR/-X	TRANSISTOR	CTL_ERASE	
Q103	or BC847BT-X	TRANSISTOR	CTL_ERASE	
Q103	or 2SD2216J/QR/-X	TRANSISTOR	CTL_ERASE	
Q105	2SC4617/RS/-X	TRANSISTOR	TAPE_LED	
Q105	or BC847BT-X	TRANSISTOR	TAPE_LED	
Q105	or 2SD2216J/RS/-X	TRANSISTOR	TAPE_LED	
Q114	DTC114EE-X	DIGI TRANSISTOR	LED_RV	
Q114	or BCR133T-X	DIGI TRANSISTOR	LED_RV	
Q118	2SC4617/QR/-X	TRANSISTOR	LED_LIGHT	B
Q118	or BC847BT-X	TRANSISTOR	LED_LIGHT	B
Q118	or 2SD2216J/QR/-X	TRANSISTOR	LED_LIGHT	B
Q119	UMX1N-W	PAIR TRANSISTOR	LED_LIGHT	B
Q119	or PUMX1-W	PAIR TRANSISTOR	LED_LIGHT	B
Q119	or BC847S-X	PAIR TRANSISTOR	LED_LIGHT	B
Q119	or XP4501-W	PAIR TRANSISTOR	LED_LIGHT	B
Q2001	DTA114TE-X	DIGI TRANSISTOR		
Q2001	or UN9115J-X	DIGI TRANSISTOR		
Q2001	or BCR129T-X	DIGI TRANSISTOR		
Q2007	PUMX1-W	PAIR TRANSISTOR		
Q2007	or UMX1N-W	PAIR TRANSISTOR		
Q2007	or XP4501-W	PAIR TRANSISTOR		
Q2007	or BC847S-X	PAIR TRANSISTOR		
Q2008	PUMT1-W	PAIR TRANSISTOR		
Q2008	or BC856S-X	PAIR TRANSISTOR		
Q2008	or UMT1N-W	PAIR TRANSISTOR		
Q2008	or XP4401-W	PAIR TRANSISTOR		
Q2021	DTC144EE-X	DIGI TRANSISTOR		
Q2021	or UN9213J-X	DIGI TRANSISTOR		
Q2021	or PDTC144EE-X	DIGI TRANSISTOR		
Q2021	or BCR148T-X	DIGI TRANSISTOR		
Q2022	DTC144EE-X	DIGI TRANSISTOR		
Q2022	or UN9213J-X	DIGI TRANSISTOR		
Q2022	or PDTC144EE-X	DIGI TRANSISTOR		
Q2022	or BCR148T-X	DIGI TRANSISTOR		
Q2023	2SC4617/QR/-X	TRANSISTOR		
Q2023	or 2SD2216J/QR/-X	TRANSISTOR		
Q2023	or BC847BT-X	TRANSISTOR		
Q2071	2SC4617/QR/-X	TRANSISTOR		
Q2071	or 2SD2216J/QR/-X	TRANSISTOR		
Q2071	or BC847BT-X	TRANSISTOR		
Q2401	DTC144EE-X	DIGI TRANSISTOR		
Q2401	or UN9213J-X	DIGI TRANSISTOR		
Q2401	or PDTC144EE-X	DIGI TRANSISTOR		
Q2401	or BCR148T-X	DIGI TRANSISTOR		
Q3501	XP4501-W	PAIR TRANSISTOR		
Q3501	or PUMX1-W	PAIR TRANSISTOR		
Q3501	or BC847S-X	PAIR TRANSISTOR		
Q3501	or UMX1N-W	PAIR TRANSISTOR		
Q3502	XP4501-W	PAIR TRANSISTOR		
Q3502	or PUMX1-W	PAIR TRANSISTOR		
Q3502	or BC847S-X	PAIR TRANSISTOR		
Q3502	or UMX1N-W	PAIR TRANSISTOR		
Q3505	DTC144EE-X	DIGI TRANSISTOR	S ONLY	B
Q3505	or UN9213J-X	DIGI TRANSISTOR	S ONLY	B
Q3505	or PDTC144EE-X	DIGI TRANSISTOR	S ONLY	B
Q3505	or BCR148T-X	DIGI TRANSISTOR	S ONLY	B
Q3901	BC856S-X	PAIR TRANSISTOR		
Q3901	or PUMT1-W	PAIR TRANSISTOR		
Q3901	or UMT1N-W	PAIR TRANSISTOR		
Q3901	or XP4401-W	PAIR TRANSISTOR		
Q4001	DTC144EE-X	DIGI TRANSISTOR	S ONLY	B
Q4001	or UN9213J-X	DIGI TRANSISTOR	S ONLY	B
Q4001	or PDTC144EE-X	DIGI TRANSISTOR	S ONLY	B
Q4001	or BCR148T-X	DIGI TRANSISTOR	S ONLY	B
Q4201	2SC4617/QR/-X	TRANSISTOR		
Q4201	or 2SD2216J/QR/-X	TRANSISTOR		
Q4201	or BC847BT-X	TRANSISTOR		
Q4202	2SC4617/QR/-X	TRANSISTOR		
Q4202	or 2SD2216J/QR/-X	TRANSISTOR		
Q4202	or BC847BT-X	TRANSISTOR		
Q4501	DTC114EE-X	DIGI TRANSISTOR		
Q4501	or UN9211J-X	DIGI TRANSISTOR		
Q4501	or PDTC114EE-X	DIGI TRANSISTOR		
Q4501	or BCR133T-X	DIGI TRANSISTOR		
Q4701	2SA1774/QR/-X	TRANSISTOR		B
Q4701	or 2SB1462J/QR/-X	TRANSISTOR		B
Q4701	or BC857BT-X	TRANSISTOR		B
Q4702	2SA1774/QR/-X	TRANSISTOR		B
Q4702	or 2SB1462J/QR/-X	TRANSISTOR		B
Q4702	or BC857BT-X	TRANSISTOR		B
Q6101	QS6U24-W	MOS FET		
Q6201	QS6U24-W	MOS FET		
Q6301	FDC6506P-X	MOS FET		
Q6401	QS6U24-W	MOS FET		
Q6501	QS6U24-W	MOS FET		
Q6604	DTC144EE-X	DIGI TRANSISTOR		
Q6604	or UN9213J-X	DIGI TRANSISTOR		
Q6604	or PDTC144EE-X	DIGI TRANSISTOR		
Q6604	or BCR148T-X	DIGI TRANSISTOR		
Q6701	RSQ035P03-W	MOS FET		
Q6702	2SC4097/QR/-X	TRANSISTOR		
Q6702	or BC817-25W-X	TRANSISTOR		
Q6802	2SB1121/ST/-X	TRANSISTOR		
Q6803	DTA144EUA-X	DIGI TRANSISTOR		
Q7001	PUMX1-W	PAIR TRANSISTOR		
Q7001	or UMX1N-W	PAIR TRANSISTOR		
Q7001	or XP4501-W	PAIR TRANSISTOR		
Q7001	or BC847S-X	PAIR TRANSISTOR		
Q7002	PUMX1-W	PAIR TRANSISTOR		
Q7002	or UMX1N-W	PAIR TRANSISTOR		
Q7002	or XP4501-W	PAIR TRANSISTOR		
Q7002	or BC847S-X	PAIR TRANSISTOR		
Q7003	PUMX1-W	PAIR TRANSISTOR		
Q7003	or UMX1N-W	PAIR TRANSISTOR		
Q7003	or XP4501-W	PAIR TRANSISTOR		
Q7003	or BC847S-X	PAIR TRANSISTOR		
Q7301	2SA1774/QR/-X	TRANSISTOR	BWYOUT	
Q7301	or 2SB1462J/QR/-X	TRANSISTOR	BWYOUT	
Q7301	or BC857BT-X	TRANSISTOR	BWYOUT	
Q7302	PUMX1-W	PAIR TRANSISTOR	VF_BL	
Q7302	or UMX1N-W	PAIR TRANSISTOR	VF_BL	
Q7302	or BC847S-X	PAIR TRANSISTOR	VF_BL	
⚠ D101	BAS40-05W-X	SB DIODE	LITHIUM	
⚠ D101	or RB715F-X	SB DIODE	LITHIUM	
D102	UDZS7.5B-X	Z DIODE	UNREG_BATT	
D103	1SS355-X	SI DIODE	TU	
D103	or MA111-X	SI DIODE	TU	
D104	1SS355-X	SI DIODE	SUP	
D104	or MA111-X	SI DIODE	SUP	
D105	MA8068-X	Z DIODE		
D4001	DAN222-X	SI DIODE	S ONLY	B
D4001	or MA132WK-X	SI DIODE	S ONLY	B
D5201	1SS355-X	SI DIODE		
D5201	or MA111-X	SI DIODE		
D6301	RB160M-30-X	SB DIODE		
D6601	1SS355-X	SI DIODE		
D6601	or MA111-X	SI DIODE		
D6602	1SS355-X	SI DIODE		
D6602	or MA111-X	SI DIODE		
D6603	1SS355-X	SI DIODE		
D6603	or MA111-X	SI DIODE		
D6604	1SS355-X	SI DIODE		

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

⚠ Symbol No.	Part No.	Part Name	Description	Local
D6604	or MA111-X	SI DIODE		
D6605	UDZS7.5B-X	Z DIODE		
D6606	UDZS5.1B-X	Z DIODE		
D6701	RB160M-30-X	SB DIODE		
D6702	RB160M-30-X	SB DIODE		
C101	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C102	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C103	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C104	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C105	NCB21CK-224X	C CAPACITOR	0.22uF 16V K	
C107	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C108	NBE21AM-225X	TA E CAPACITOR	2.2uF 10V M	
C109	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C110	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C112	NEAF0JM-226X	E CAPACITOR	22uF 6.3V M	
C113	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C114	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C115	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C118	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C119	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C120	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C121	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C122	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C123	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C124	NDC31HJ-120X	C CAPACITOR	12pF 50V J	
C125	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C126	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C127	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
C128	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C129	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
C131	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C132	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C133	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C134	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C138	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C140	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C142	NDC31HJ-3R0X	C CAPACITOR	3pF 50V J	
C143	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C144	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	B
C147	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1201	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C1202	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1205	NCB31EK-153X	C CAPACITOR	0.015uF 25V K	
C1206	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1601	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
C1602	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
C1603	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
C1604	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1605	NCB31HK-681X	C CAPACITOR	680pF 50V K	
C1606	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1607	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C1608	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C1609	NCB21CK-334X	C CAPACITOR	0.33uF 16V K	
C1610	NCB31HK-822X	C CAPACITOR	8200pF 50V K	
C1611	NCB31HK-822X	C CAPACITOR	8200pF 50V K	
C1612	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1613	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C1614	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1615	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1616	NCB21EK-224X	C CAPACITOR	0.22uF 25V K	
C1617	NCB21EK-224X	C CAPACITOR	0.22uF 25V K	
C1618	NCB31CK-683X	C CAPACITOR	0.068uF 16V K	
C1619	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C1628	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C1629	NCB21EK-224X	C CAPACITOR	0.22uF 25V K	
C2001	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C2002	NFV91HJ-183X	MPPS CAPACITOR	0.018uF 50V J	
C2003	NDC31HJ-331X	C CAPACITOR	330pF 50V J	
C2004	NEAF0JM-226X	E CAPACITOR	22uF 6.3V M	
C2005	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C2021	NCB31EK-682X	C CAPACITOR	6800pF 25V K	
C2022	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C2023	NBP21CM-105X	TA E CAPACITOR	1uF 16V M	
C2024	NCB31HK-122X	C CAPACITOR	1200pF 50V K	
C2025	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C2026	NCB31EK-222X	C CAPACITOR	2200pF 25V K	
C2027	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C2028	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C2029	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C2031	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C2032	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C2033	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
C2034	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C2035	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C2036	NCB21AK-105X	C CAPACITOR	1uF 10V K	
C2038	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C2051	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C2071	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C2072	NCB31EK-222X	C CAPACITOR	2200pF 25V K	
C2401	NEAF0GM-476X	E CAPACITOR	47uF 4V M	
C2402	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C2403	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C2404	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C3506	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3507	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3508	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C3512	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C3513	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C3514	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3515	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3902	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C3903	NDC31HJ-3R0X	C CAPACITOR	3pF 50V J	
C4002	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4003	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4004	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4005	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4007	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4008	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4009	NDC31HG-100X	C CAPACITOR	10pF 50V G	
C4010	NDC31HG-100X	C CAPACITOR	10pF 50V G	
C4012	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4013	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4015	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4017	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4018	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4019	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4021	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4023	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4025	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	B
C4026	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C4027	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4028	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4030	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4031	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4032	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4033	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4035	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4037	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4038	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4039	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4040	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4041	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4042	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4045	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4046	NDC31HJ-221X	C CAPACITOR	220pF 50V J	
C4047	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4048	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4049	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C4052	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C4053	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C4054	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C4055	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C4201	NEAF1HM-225X	E CAPACITOR	2.2uF 50V M	
C4202	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4203	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4206	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4207	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C4209	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4210	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C4211	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4252	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4502	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
C4503	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
C4504	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

⚠ Symbol No.	Part No.	Part Name	Description	Local
C4505	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C4506	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C4507	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4508	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4509	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C4510	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4702	NDC31HJ-270X	C CAPACITOR	27pF 50V J	B
C4703	NDC31HJ-5R0X	C CAPACITOR	5pF 50V J	B
C4704	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4705	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	B
C4706	NEAF0GM-107X	E CAPACITOR	100uF 4V M	
C4707	NEAF0GM-336X	E CAPACITOR	33uF 4V M	A
C4707	NEAF0JM-226X	E CAPACITOR	22uF 6.3V M	B
C4708	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C4709	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C4713	NEAF0JM-226X	E CAPACITOR	22uF 6.3V M	B
C4714	NEAF0GM-107X	E CAPACITOR	100uF 4V M	B
C4715	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	B
C4716	NDC31HJ-270X	C CAPACITOR	27pF 50V J	B
C4717	NDC31HJ-5R0X	C CAPACITOR	5pF 50V J	B
C5201	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C5203	NEAF1CM-106X	E CAPACITOR	10uF 16V M	
C5204	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C5207	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5209	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5211	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5212	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5213	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5214	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5215	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
C5216	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C5218	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C5219	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C5220	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5221	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C5222	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5223	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5224	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C5225	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5226	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5231	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6002	NCB21HK-102X	C CAPACITOR	1000pF 50V K	
C6003	NEAF1CM-106X	E CAPACITOR	10uF 16V M	
C6021	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6022	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6023	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6024	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6025	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6026	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6027	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C6029	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C6030	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C6031	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C6032	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C6033	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C6034	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6035	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6036	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C6037	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C6038	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C6039	NCB21CK-224X	C CAPACITOR	0.22uF 16V K	
C6040	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C6041	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C6042	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C6043	NCB31CK-683X	C CAPACITOR	0.068uF 16V K	
C6044	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C6045	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6046	NCB31HK-561X	C CAPACITOR	560pF 50V K	
C6101	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6103	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6104	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C6201	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6203	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6204	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C6301	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
C6303	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6304	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C6401	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6403	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6405	NCB31CK-683X	C CAPACITOR	0.068uF 16V K	
C6501	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6503	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6505	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6602	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6603	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C6606	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6607	NCB11EK-105X	C CAPACITOR	1uF 25V K	
C6701	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6703	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6705	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C6801	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C6802	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6803	NCF21CZ-105X	C CAPACITOR	1uF 16V Z	
C6804	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7001	NEAF1EM-475X	E CAPACITOR	4.7uF 25V M	
C7002	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7003	NEAF1CM-106X	E CAPACITOR	10uF 16V M	
C7004	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7005	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7006	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7007	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7008	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7009	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
C7010	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
C7011	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
C7302	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7303	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7304	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7306	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7307	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7308	NCB21CK-334X	C CAPACITOR	0.33uF 16V K	
C7309	NCB21CK-334X	C CAPACITOR	0.33uF 16V K	
C7311	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7312	NEAF1CM-106X	E CAPACITOR	10uF 16V M	
C7313	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R101	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R102	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R103	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R105	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R106	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R107	NRVA63D-153X	CMF RESISTOR	15kΩ 1/16W D	
R108	NRVA63D-243X	CMF RESISTOR	24kΩ 1/16W D	
R109	NRVA63D-183X	CMF RESISTOR	18kΩ 1/16W D	
R110	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R111	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R112	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R113	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R114	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R115	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R116	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R117	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R118	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R119	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R120	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R121	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R122	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R127	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R128	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R129	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R130	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R131	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R132	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R133	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R134	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R135	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R136	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R137	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R138	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R139	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	B
R140	NRSA63J-753X	MG RESISTOR	75kΩ 1/16W J	
R141	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R142	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R143	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R144	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R145	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

⚠ Symbol No.	Part No.	Part Name	Description	Local
R147	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R148	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R149	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R150	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R151	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R152	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R153	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R154	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R155	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
⚠ R156	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R157	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	B
R158	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R159	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R160	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R161	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	B
R163	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R164	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R165	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R166	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R167	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R168	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R169	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R170	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R171	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R172	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R173	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R174	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R175	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R176	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R177	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R178	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R179	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R180	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R190	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R191	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R192	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R193	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R198	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R199	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	B
R200	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	B
R201	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	B
R202	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	B
R203	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B
R1601	NRV142F-R33X	CMF RESISTOR	0.33Ω 1/4W F	
R1602	NRV142F-R33X	CMF RESISTOR	0.33Ω 1/4W F	
R1603	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R1604	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R1605	NRSA63J-684X	MG RESISTOR	680kΩ 1/16W J	
R1606	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R1607	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1608	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R1609	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R1610	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R1611	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R1612	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R1613	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R1614	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J	
R1615	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1616	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R1617	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R1618	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R1619	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R2001	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R2002	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R2003	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2004	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R2005	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R2006	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2011	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R2012	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R2021	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R2022	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R2023	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R2024	NRSA63J-133X	MG RESISTOR	13kΩ 1/16W J	
R2025	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R2027	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2028	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2030	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R2031	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R2051	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2071	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R2072	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R2401	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R2402	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R2403	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R3501	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3502	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3506	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3507	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3508	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R3901	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R3902	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R3903	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R4001	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R4002	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R4003	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R4004	NRSA63D-682X	MG RESISTOR	6.8kΩ 1/16W D	
R4009	NRSA63D-272X	MG RESISTOR	2.7kΩ 1/16W D	
R4010	NRSA63D-682X	MG RESISTOR	6.8kΩ 1/16W D	
R4014	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B
R4016	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4019	NRSA63D-272X	MG RESISTOR	2.7kΩ 1/16W D	
R4020	NRSA63D-221X	MG RESISTOR	220Ω 1/16W D	
R4021	NRSA63D-101X	MG RESISTOR	100Ω 1/16W D	
R4022	NRSA63D-152X	MG RESISTOR	1.5kΩ 1/16W D	
R4024	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4025	NRSA63D-152X	MG RESISTOR	1.5kΩ 1/16W D	
R4027	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R4028	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R4029	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R4030	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R4031	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R4032	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4033	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R4034	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R4035	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R4037	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R4038	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R4039	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R4040	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	
R4041	NRSA63D-222X	MG RESISTOR	2.2kΩ 1/16W D	
R4042	NRSA63D-122X	MG RESISTOR	1.2kΩ 1/16W D	
R4043	NRSA63D-122X	MG RESISTOR	1.2kΩ 1/16W D	
R4044	NRSA63D-222X	MG RESISTOR	2.2kΩ 1/16W D	
R4045	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4046	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4047	NQR0406-003X	FERRITE BEADS		
R4201	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4202	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4203	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R4204	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R4205	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R4206	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4207	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R4208	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R4209	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R4210	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R4211	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J	
R4214	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R4215	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R4216	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4217	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R4219	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R4221	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R4222	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J	
R4223	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R4224	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
⚠ R4501	NRSA63J-6R8X	MG RESISTOR	6.8Ω 1/16W J	
⚠ R4502	NRSA63J-6R8X	MG RESISTOR	6.8Ω 1/16W J	
⚠ R4503	NRSA63J-6R8X	MG RESISTOR	6.8Ω 1/16W J	
⚠ R4504	NRSA63J-6R8X	MG RESISTOR	6.8Ω 1/16W J	
R4505	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4507	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4508	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R4509	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R4516	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

⚠ Symbol No.	Part No.	Part Name	Description	Local
R4527	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4701	NRSA63J-131X	MG RESISTOR	130Ω 1/16W J	A
R4701	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	B
R4703	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	B
R4704	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R4706	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	
R4707	NRSA63D-241X	MG RESISTOR	240Ω 1/16W D	B
R4709	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	B
R4710	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	B
R4712	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	B
R4713	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	B
R4714	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	A
R4715	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	A
R5201	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R5203	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R5204	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R5205	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R5206	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R5208	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R5212	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R5214	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	
R5218	NQR0360-001X	FERRITE BEADS		
R5219	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R5220	NQR0360-001X	FERRITE BEADS		
R5221	NQR0360-001X	FERRITE BEADS		
R6007	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R6008	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R6027	NRSA63D-153X	MG RESISTOR	15kΩ 1/16W D	
R6028	NRSA63D-681X	MG RESISTOR	680Ω 1/16W D	
R6029	NRSA63D-912X	MG RESISTOR	9.1kΩ 1/16W D	
R6030	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R6031	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R6033	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R6034	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R6035	NRSA63D-184X	MG RESISTOR	180kΩ 1/16W D	
R6036	NRSA63D-184X	MG RESISTOR	180kΩ 1/16W D	
R6037	NRSA63D-562X	MG RESISTOR	5.6kΩ 1/16W D	
R6038	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R6039	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R6044	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R6045	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R6046	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R6047	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R6102	NRVA63D-223X	CMF RESISTOR	22kΩ 1/16W D	
R6103	NRVA63D-103X	CMF RESISTOR	10kΩ 1/16W D	
R6110	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R6202	NRVA63D-103X	CMF RESISTOR	10kΩ 1/16W D	
R6203	NRVA63D-123X	CMF RESISTOR	12kΩ 1/16W D	
R6204	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R6302	NRVA63D-183X	CMF RESISTOR	18kΩ 1/16W D	
R6303	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R6310	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R6402	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R6403	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R6405	NRSA63J-753X	MG RESISTOR	75kΩ 1/16W J	
R6406	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R6502	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R6503	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R6505	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R6506	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R6507	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J	
R6602	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J	
R6603	NRVA63D-392X	CMF RESISTOR	3.9kΩ 1/16W D	
R6604	NRVA63D-683X	CMF RESISTOR	68kΩ 1/16W D	
R6612	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R6613	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R6619	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R6620	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R6621	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R6701	NRZ0098-R20X	MG RESISTOR	0.2Ω	
R6703	NRVA63D-153X	CMF RESISTOR	15kΩ 1/16W D	
R6706	NRVA63D-823X	CMF RESISTOR	82kΩ 1/16W D	
R6707	NRVA63D-333X	CMF RESISTOR	33kΩ 1/16W D	
R6708	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R6709	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R6710	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6711	NRS016J-121X	MG RESISTOR	120Ω 1W J	
R6712	NRS016J-121X	MG RESISTOR	120Ω 1W J	
R6713	NRS016J-121X	MG RESISTOR	120Ω 1W J	
R6802	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R6803	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R6804	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R6805	NRVA63D-104X	CMF RESISTOR	100kΩ 1/16W D	
R6806	NRVA63D-124X	CMF RESISTOR	120kΩ 1/16W D	
R6807	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6808	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6811	NRVA63D-154X	CMF RESISTOR	150kΩ 1/16W D	
R7001	NRSA63D-123X	MG RESISTOR	12kΩ 1/16W D	
R7002	NRSA63D-103X	MG RESISTOR	10kΩ 1/16W D	
R7003	NRSA63D-242X	MG RESISTOR	2.4kΩ 1/16W D	
R7004	NRSA63D-822X	MG RESISTOR	8.2kΩ 1/16W D	
R7005	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R7006	NRSA63D-242X	MG RESISTOR	2.4kΩ 1/16W D	
R7007	NRSA63D-822X	MG RESISTOR	8.2kΩ 1/16W D	
R7008	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R7009	NRSA63D-242X	MG RESISTOR	2.4kΩ 1/16W D	
R7010	NRSA63D-822X	MG RESISTOR	8.2kΩ 1/16W D	
R7011	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R7012	NRSA63D-333X	MG RESISTOR	33kΩ 1/16W D	
R7013	NRSA63D-333X	MG RESISTOR	33kΩ 1/16W D	
R7014	NRSA63D-333X	MG RESISTOR	33kΩ 1/16W D	
R7015	NRSA63D-333X	MG RESISTOR	33kΩ 1/16W D	
R7016	NRSA63D-333X	MG RESISTOR	33kΩ 1/16W D	
R7017	NRSA63D-333X	MG RESISTOR	33kΩ 1/16W D	
R7018	NRSA63J-150X	MG RESISTOR	15Ω 1/16W J	
R7019	NRSA63J-150X	MG RESISTOR	15Ω 1/16W J	
R7020	NRSA63J-150X	MG RESISTOR	15Ω 1/16W J	
R7301	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7302	NRSA63D-821X	MG RESISTOR	820Ω 1/16W D	
R7303	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	
R7304	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7308	NRSA63J-514X	MG RESISTOR	510kΩ 1/16W J	
R7309	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R7311	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7313	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7315	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7316	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7319	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7321	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
R7325	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7327	NRSA63D-332X	MG RESISTOR	3.3kΩ 1/16W D	
R7328	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D	
R7331	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R7332	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R7333	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7335	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7336	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7344	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7345	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
RA101	NRZ0038-222X	NET RESISTOR	2.2kΩ 1/16W J x4	
RA102	NRZ0038-222X	NET RESISTOR	2.2kΩ 1/16W J x4	
RA103	NRZ0038-222X	NET RESISTOR	2.2kΩ 1/16W J x4	
RA104	NRZ0038-222X	NET RESISTOR	2.2kΩ 1/16W J x4	
RA107	NRZ0038-222X	NET RESISTOR	2.2kΩ 1/16W J x4	
RA108	NRZ0038-222X	NET RESISTOR	2.2kΩ 1/16W J x4	
RA109	NRZ0038-474X	NET RESISTOR	470kΩ 1/16W J x4	
RA110	NRZ0038-474X	NET RESISTOR	470kΩ 1/16W J x4	
RA111	NRZ0038-474X	NET RESISTOR	470kΩ 1/16W J x4	
RA112	NRZ0038-104X	NET RESISTOR	100kΩ 1/16W J x4	
RA6001	NRZ0038-102X	NET RESISTOR	1kΩ 1/16W J x4	
L101	NQL315K-220X	INDUCTOR	22uH K	
L1603	NQL315K-470X	INDUCTOR	47uH K	
L1604	NQL315K-470X	INDUCTOR	47uH K	
L2001	NQL315K-470X	INDUCTOR	47uH K	
L2003	NQL914K-470X	INDUCTOR	47uH K	
L2004	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L2005	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L2021	NQR0006-001X	FERRITE BEADS		
L2022	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L2023	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L2052	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L2072	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L2401	NQR0006-001X	FERRITE BEADS		
L3502	NQR0006-001X	FERRITE BEADS		
L4001	NQR0006-001X	FERRITE BEADS		

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

⚠ Symbol No.	Part No.	Part Name	Description	Local
L4002	NQR0006-001X	FERRITE BEADS		
L4201	NQR0006-001X	FERRITE BEADS		
L4501	NQR0006-001X	FERRITE BEADS		
L4502	NQL914K-220X	INDUCTOR	22uH K	
L4701	NQR0006-001X	FERRITE BEADS		
L5201	NQL315K-220X	INDUCTOR	22uH K	
L5203	NQR0006-001X	FERRITE BEADS		
L5204	NQR0006-001X	FERRITE BEADS		
L6001	NQL73EM-100X	INDUCTOR	10uH M	
L6002	NQL73EM-100X	INDUCTOR	10uH M	
L6101	NQL82EN-330X	INDUCTOR	33uH N	
L6201	NQL82EN-470X	INDUCTOR	47uH N	
L6301	NQL52EM-220X	INDUCTOR	22uH M	
L6401	NQL52EM-470X	INDUCTOR	47uH M	
L6501	NQL52EM-470X	INDUCTOR	47uH M	
L6601	NQL52EM-221X	INDUCTOR	220uH M	
L6701	NQL73EM-100X	INDUCTOR	10uH M	
L7001	NQL315K-220X	INDUCTOR	22uH K	
L7002	NQL315K-220X	INDUCTOR	22uH K	
L7301	NQR0006-001X	FERRITE BEADS		
L7302	NQL315K-220X	INDUCTOR	22uH K	
CN1	QGF0534F2-10X	CONNECTOR	DRUM.MOTOR FFC/FPC (1-10)	
CN2	QGF0534F2-14X	CONNECTOR	SENSOR FFC/FPC (1-14)	
CN3	QGF0503F8-18X	CONNECTOR	CAPSTAN.M. FFC/FPC (1-18)	
CN4	QGA1201F2-02X	CONNECTOR	LOADING.M. W-B (1-2)	
CN5	QGF0534F2-11X	CONNECTOR	VIDEO.HEAD FFC/FPC (1-11)	
CN7	QGF0534F2-11X	CONNECTOR	A/C.HEAD FFC/FPC (1-11)	
CN8	QGA1201C2-02X	CONNECTOR	MIC W-B (1-2)	
CN9	QGA1201C2-03X	CONNECTOR	LED_LAMP3P W-B (1-3)	B
CN13	QGF0507F8-14X	CONNECTOR	JVC Z.OPE FFC/FPC (1-14)	
CN15	QGF0534F2-24X	CONNECTOR	OP FFC/FPC (1-24)	
CN16	QGF0534F2-25X	CONNECTOR	LCD 25P FFC/FPC (1-25)	
CN18	QGF0536C3-06W	CONNECTOR	TOP OPE FFC/FPC (1-6)	
CN22	QGF0534F2-14X	CONNECTOR	CCD FFC/FPC (1-14)	
CN25	QGB0801M1-20X	CONNECTOR	JV/PA JIG B-B (1-20)	
CN27	QGA1201C2-02X	CONNECTOR	SPEAKER 2P W-B (1-2)	
CN28	QGA1002F1-10X	CONNECTOR	REAR.UNIT W-B (1-10)	
CN7301	QGF0534F2-14X	CONNECTOR	BWVF FFC/FPC (1-14)	
⚠ F1601	NMFZ007-R20X-K	FUSE	UNREG 0.2A 50V	
⚠ F1602	NMFZ007-R50X-K	FUSE	REG_3.2V 0.5A 50V	
⚠ F6001	NMFZ007-2R0X-K	FUSE	2A 32V	
⚠ F6301	NMFZ007-1R6X-K	FUSE	1.6A 32V	
⚠ F6302	NMFZ019-R40X-H	FUSE	0.4A 32V	
⚠ F6801	NMFZ019-R25X-H	FUSE	0.25A 32V	
⚠ J101	QAB0050-001	LI BATTERY	LITHIUM	
J504	LY33041-001A	JACK UNIT	AV OUT	
J505	QND0068-001	S JACK	S OUT	B
Q101	2SA1774/RS/-X	TRANSISTOR	UNREG	
X101	NAX0571-001	CRYSTAL	16.000MHz	
X102	NAX0564-001X	CRYSTAL	32.768kHz	
X4001	QAX0784-001	CRYSTAL		
OT1	LY30016-049A	SPACER-A	AUDIO PB	
SD1	LY43421-001B	SHIELD PLATE	SHIELD	
WR1	WJV0081-001A-E	E-PRIMARY WIRE	AUDIO PB	

CCD BOARD ASSEMBLY <02>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW2	LYA10022-02D2	CCD BOARD ASSY		
Q5301	2SC3931/CD/-X	TRANSISTOR		
Q5301 or	2SC4774/RS/-X	TRANSISTOR		
Q5301 or	2SC5345U/Y/-X	TRANSISTOR		
C5301	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5302	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
C5303	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C5304	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C5305	NDC31HJ-270X	C CAPACITOR	27pF 50V J	
R5301	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R5302	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
CN5301	QGF0501F5-14X	CONNECTOR	M5A/C FFC/FPC (1-14)	

FRONT BOARD ASSEMBLY <03>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20017-01A	FRONT BOARD ASSY		B
DI301	NSPW500BS/CRS/	LED		B
DI302	NSPW500BS/CRS/	LED		B
WR1	WJM0407-001A-E	E-SI C WIRE C-F		B

TOP BOARD ASSEMBLY <04>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20018-02A	TOP BOARD ASSY		
R401	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R402	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R403	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R404	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN401	QGF0503F7-06X	CONNECTOR	TOP OPE FFC/FPC (1-6)	
DI401	SML-010LT-X	LED		
S401	NSW0198-001X	TACT SWITCH	REW	
S402	NSW0198-001X	TACT SWITCH	FF	
S403	NSW0198-001X	TACT SWITCH	PLAY/STILL	
S404	NSW0198-001X	TACT SWITCH	STOP/EJECT	

VF BOARD ASSEMBLY <05>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20016-02A	BWVF BOARD ASSY		
D7401	E1S35AW0C501-X	LED		
C7401	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
CN7401	QGF0545F2-14X	CONNECTOR	FFC/FPC (1-14)	
CN7402	QGF0530F4-15W	CONNECTOR	FFC/FPC (1-15)	

MONITOR BOARD ASSEMBLY <07>

⚠ Symbol No.	Part No.	Part Name	Description	Local
PW1	LYA20015-02A	MONITOR BOARD ASSY		
IC7604	DN8797MS-X	IC		
Q7501	2SD1664/QR/-W	TRANSISTOR		
Q7501 or	STD1664/Y/-W	TRANSISTOR		
Q7502	2SD1664/QR/-W	TRANSISTOR		
Q7502 or	STD1664/Y/-W	TRANSISTOR		
Q7503	DTA144EE-X	DIGI TRANSISTOR		
Q7503 or	UN9113J-X	DIGI TRANSISTOR		
Q7503 or	RN2104-X	DIGI TRANSISTOR		
Q7503 or	BCR198T-X	DIGI TRANSISTOR		
Q7504	DTC144EE-X	DIGI TRANSISTOR		
Q7504 or	UN9213J-X	DIGI TRANSISTOR		
Q7504 or	BCR148T-X	DIGI TRANSISTOR		
C7501	NCZ1016-120X	C CAPACITOR	12pF 2kV J	
C7502	NCB21EK-273X	C CAPACITOR	0.027uF 25V K	
C7503	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7504	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7602	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C7603	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C7604	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7605	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7606	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7610	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7611	NCB31CK-105X	C CAPACITOR	1uF 16V K	

MODEL	MARK
GR-AXM18US	A
GR-SXM38US	B

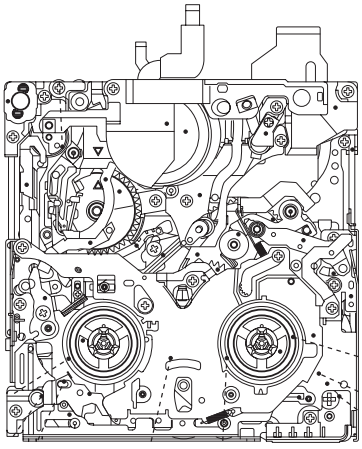
⚠ Symbol No.	Part No.	Part Name	Description	Local
C7612	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7613	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7614	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7615	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C7616	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7617	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7618	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7619	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C7622	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
R7501	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7502	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7503	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7602	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7603	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R7604	NRSA63J-363X	MG RESISTOR	36kΩ 1/16W J	
R7605	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L7501	NQLZ010-680X	INDUCTOR	68uH	
L7502	NQL03BK-100X	P COIL	10uH K	
L7601	NQL315K-100X	INDUCTOR	10uH K	
L7603	NQL315K-100X	INDUCTOR	10uH K	
T7501	NQS0056-001X	SW TARNSF		
CN7601	QGF0303F2-25W	CONNECTOR	FFC/FPC (1-25)	
CN7602	QGF0508F3-40X	CONNECTOR	FFC/FPC (1-40)	
⚠ F7501	NMFZ007-R40X-K	FUSE	0.4A 50V	
OT1	QAL0449-002	FPC		

JVC

SERVICE MANUAL

MECHANISM ASSEMBLY

DVC MECHANISM
VHS-C MECHANISM
VHS MECHANISM



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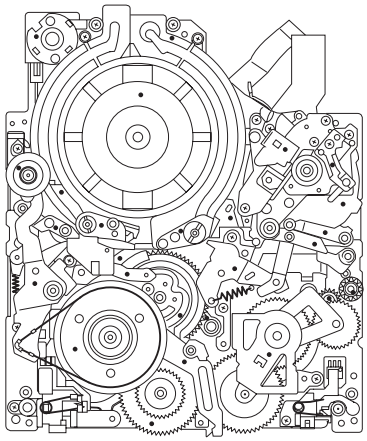

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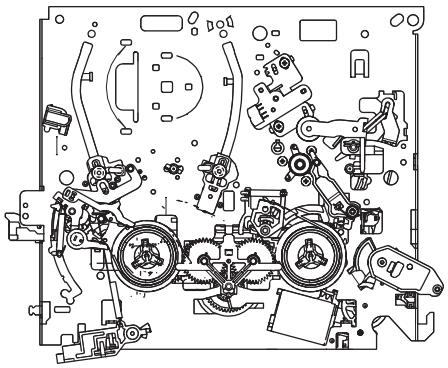

<VHS MECHANISM>

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2 SPECIFIC SERVICE INSTRUCTIONS 2-1
3 PARTS LIST 3-1

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No.86700
2003/04

SECTION 1
JIGS AND TOOLS

1.1 TOOLS REQUIRED FOR ADJUSTMENTS

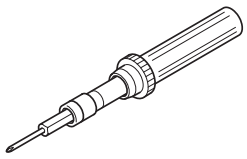
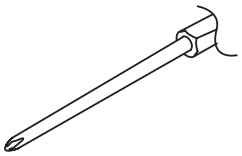
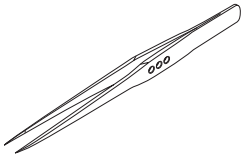
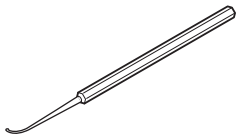
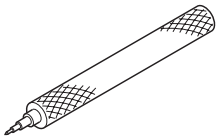
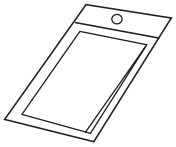
1. Torque driver YTU94088	2. Bit YTU94088-003
	
3. Tweezers P-895	4. Chip IC replacement jig PTS40844-2
	
5. Slit washer installation jig YTU94121A	6. Cleaning cloth KSMM-01
	

Fig.1-1-1

1. Torque driver
Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.
Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.

2. Bit
This bit is slightly longer than those set in conventional torque drivers.

3. Tweezers
To be used for removing and installing parts and wires.

4. Chip IC replacement jig
To be used for replacement of part.

5. Slit washer installation jig
To be used to install slit washers.

6. Cleaning cloth
Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 DVC MECHANISM

2.1.1 Precautions

(1) When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.055 N•m (0.56 kgf•cm).
(2) Be sure to disconnect the set from the power supply before fastening and soldering parts.
(3) When disconnecting/connecting wires, be careful not to get them and their connectors damaged.
(4) When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

2.1.2 Notes on procedure for disassembly/assembly

The disassembling procedure table (Fig. 2-1-10 on page 2-4,a part of the table is shown below for reference)shows the procedure to disassemble/reassemble mechanism parts.
Carefully read the following explanation before starting actual disassembling/reassembling work. The item numbers(circled numbers)in the following explanation correspond to those appearing under respective columns of the table.

Example

NO.	PART NAME		FIG.	POINT	NOTE	REMARKS
[1]	CASSETTE HOUSING ASSY	T	Fig.2-4-3	3(S1),(L1a)-(L1e)	**NOTE 1 a,b,c,d**	ADJUSTMENT
[2]	UPPER BASE ASSY	T	Fig.2-4-4	(S2),(L2a),(L2b)	**NOTE 2**	
[3]	DRUM ASSY	T		(S3a),2(S3b)	**NOTE 3 a,b**	
[4]	REEL DISK ASSY(SUP)	T	Fig.2-4-5	(W4)	**NOTE 4 a**	
[5]	REEL DISK ASSY(TU)	T		(W5a),(W5b),(W5c)	**NOTE 5 a,b**	
[6]	REEL COVER ASSY	T		(W6),(S6a),2(S6b)	**NOTE 6**	ADJUSTMENT

*1 *2 *3 *4 *5 *6 *7

*1 Numbers appearing in this column indicate the order to remove parts. When reassembling, follow these numbers in the reverse order. Circled numbers in this column correspond to those appearing in drawings of this section.
*2 This column shows part names corresponding to numbers in the left column.
*3 The symbol (T or B)appearing in this column shows the side which the objective part is mounted on.
T =the upper side, B =the lower side
*4 Symbols appearing in this column indicate drawing numbers.
*5 This column indicates parts and points such as screws, washers,springs,and others to be removed/fitted for disassembling/reassembling the mechanism. Besides such the parts, this column occasionally indicates working points.

P = Spring
W = Washer
S = Screw
* = Lock (L),soldering (SD),shield,connector (CN),etc.

Example

- Remove (W1)=Washer W1.
- Remove the solder at (SD1)=Point SD1.
- Disconnect A = Connector A.

*6 Numbers in this column represent the numbers of notes in the text.
(For parts that need phase adjustment after reassembling, refer to “MECHANISM ADJUSTMENTS”.)
*7 This column indicates required after-disassembling/-reassembling work such as phase adjustment or mechanism adjustment.

2.1.3 DISASSEMBLY AND ASSEMBLY OF MECHANISM ASSEMBLY

2.1.3.1 General statement

The mechanism should generally be disassembled/assembled in the C.IN mode (ASSEMBLY mode). (Refer to Fig. 2-1-1,2-1-2.) However, when the mechanism is removed from the main body, it is set in the STOP mode. Therefore, after the mechanism is removed from the main body, supply 3 V DC to the electrode on the top of the loading motor to enter the mechanism mode into the C IN mode compulsory.

<Mechanism assembly/Cassette housing assembly>

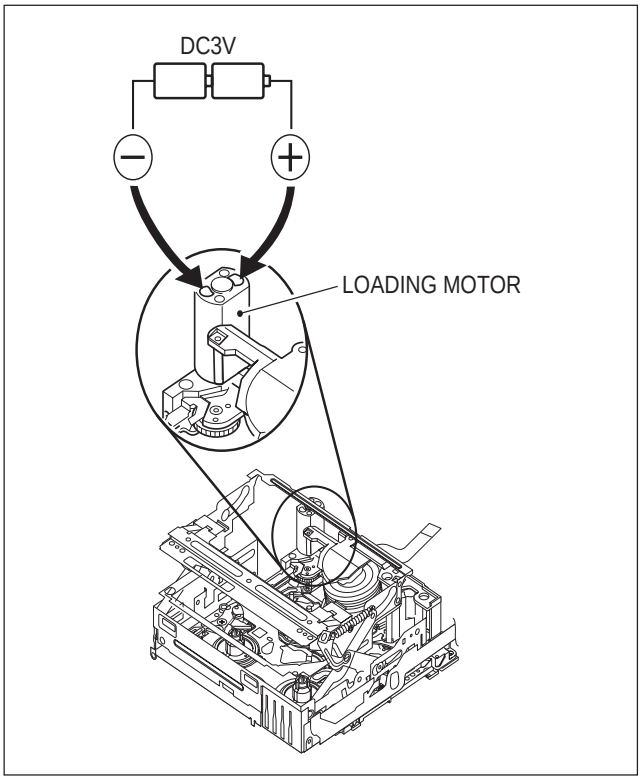


Fig.2-1-1

<Back side of the mechanism assembly>

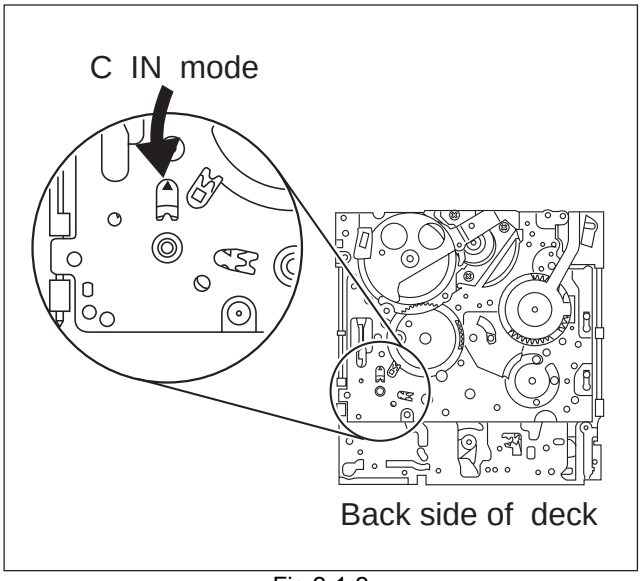


Fig.2-1-2

2.1.3.2 Explanation of mechanism mode

The mechanism mode of this model is classified into five modes as shown in Fig. 2-1-9. Each mechanism mode can be distinguished from others by the relative position of "△", "○", "⬭", "□" marks on the sub cam gear to the inner or outer protrusion on the main deck.

Refer to Fig. 2-1-3 to 2-1-8 below.

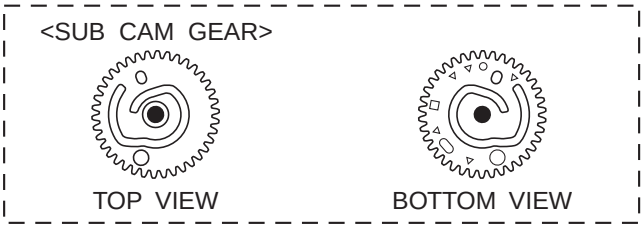


Fig.2-1-3

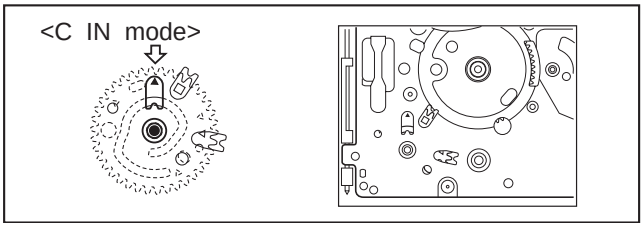


Fig.2-1-4

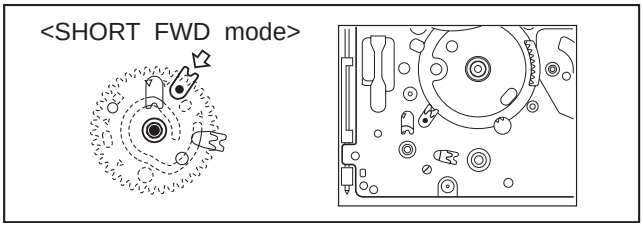


Fig.2-1-5

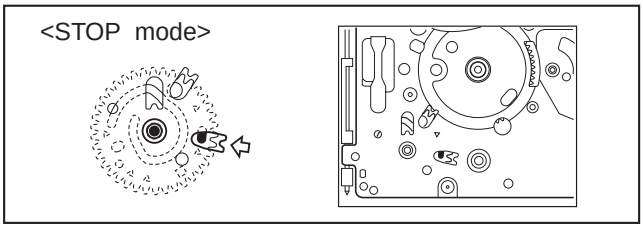


Fig.2-1-6

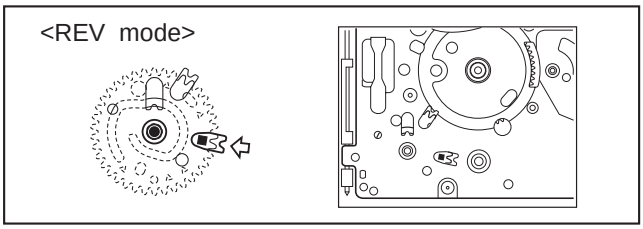


Fig.2-1-7

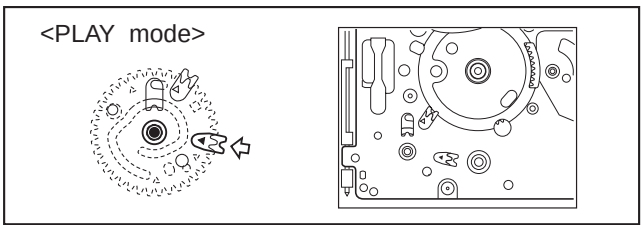


Fig.2-1-8

2.1.3.3 Mechanism timing chart

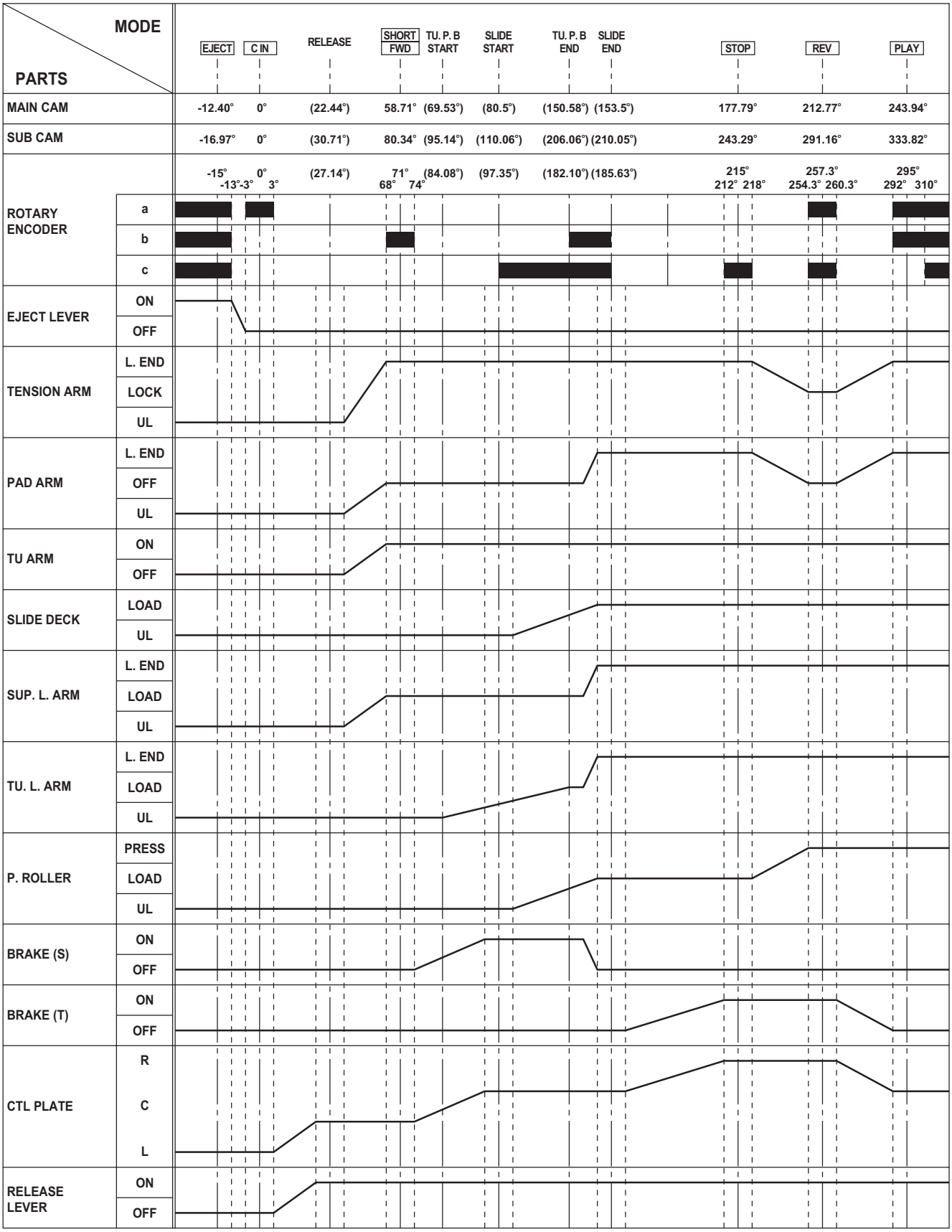


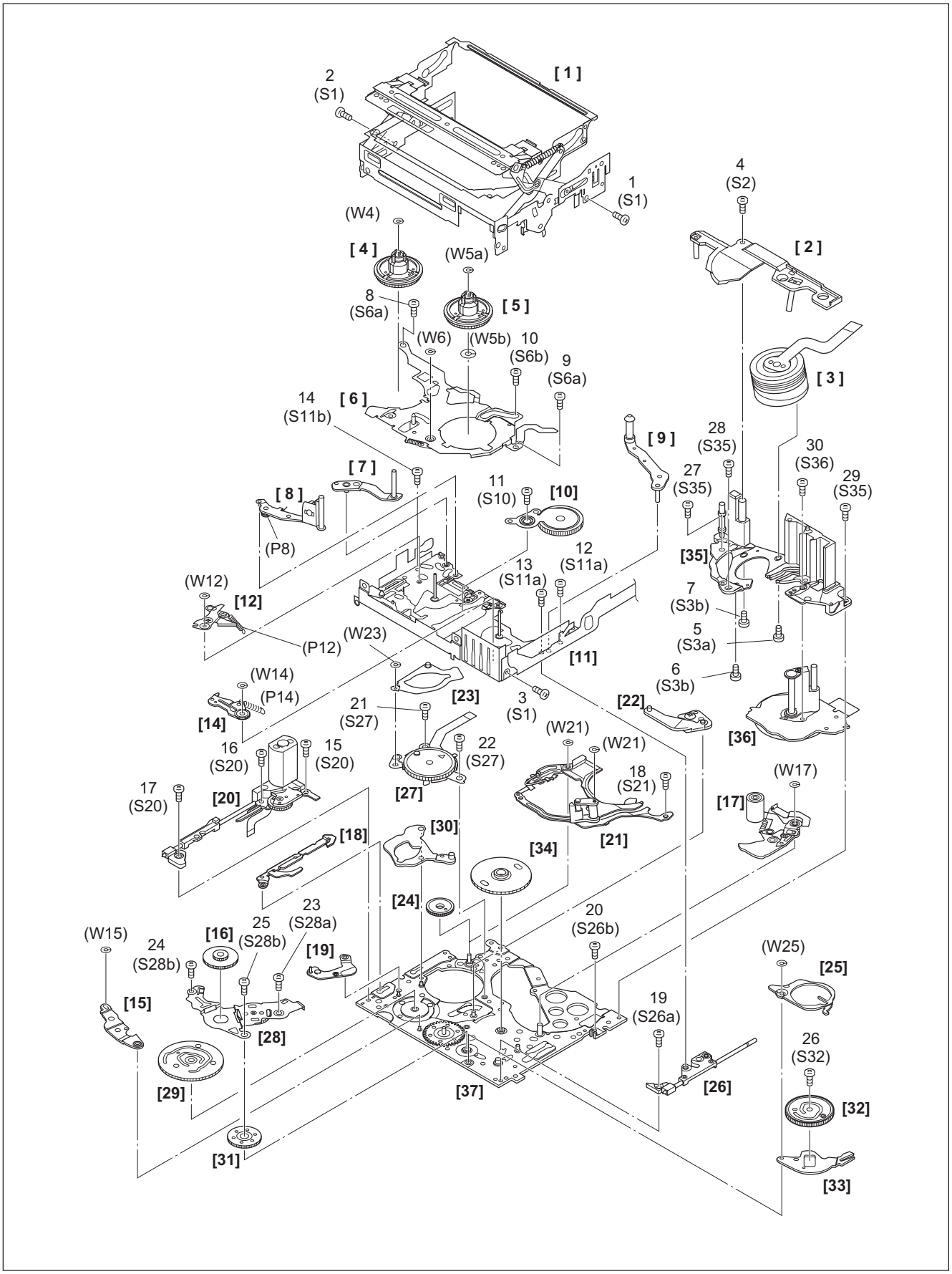
Fig.2-1-9

2.1.4 DISASSEMBLY PROCEDURE TABLE

MARK: # After assembly, perform adjustments.

NO.	PART NAME		FIG.	POINT	NOTE	REMARKS
[1]	CASSETTE HOUSING ASSY	T	Fig.2-1-14	3(S1),(L1a)-(L1e)	**NOTE 1 a,b,c,d**	ADJUSTMENT
[2]	UPPER BASE ASSY	T	Fig.2-1-15	(S2),(L2a),(L2b)	**NOTE 2**	
[3]	DRUM ASSY	T		(S3a),2(S3b)	**NOTE 3 a,b**	ADJUSTMENT
[4]	REEL DISK ASSY(SUP)	T	Fig.2-1-16	(W4)	**NOTE 4**	
[5]	REEL DISK ASSY(TU)	T		(W5a),(W5b)	**NOTE 5 a,b**	
[6]	REEL COVER ASSY	T		(W6),2(S6a),(S6b)	**NOTE 6**	
[7]	TENSION ARM ASSY	T	Fig.2-1-17	(L7)	**NOTE 7**	ADJUSTMENT / #
[8]	SLANT POLE ARM ASSY	T		(P8)	**NOTE 8**	ADJUSTMENT
[9]	TU ARM ASSY	T		(L9)	**NOTE 9**	ADJUSTMENT
[10]	SWING ARM ASSY	T		(S10)	**NOTE 10**	ADJUSTMENT
[11]	SLIDE DECK ASSY	T	Fig.2-1-18	2(S11a),(S11b),2(L11a), 2(L11b),(L11c)	**NOTE 11a,b**	ADJUSTMENT / #
[12]	PAD ARM ASSY	T	Fig.2-1-19	(P12),(L12),(W12)	**NOTE 12**	ADJUSTMENT / #
[13]	-	-		-	-	
[14]	TU BRAKE ASSY	T		(P14),(L14),(W14)	**NOTE 14**	ADJUSTMENT
[15]	TENSION CTL LEVER ASSY	T	Fig.2-1-20	(W15)	**NOTE 15**	ADJUSTMENT
[16]	CENTER GEAR	T		-	**NOTE 16**	
[17]	PINCH ROLLER ARM F. ASSY	T		(W17)	**NOTE 17**	ADJUSTMENT
[18]	TENSION CTL PLATE ASSY	T		-	**NOTE 18**	ADJUSTMENT
[19]	BRAKE CTL LEVER ASSY	T		-	**NOTE 19**	ADJUSTMENT
[20]	MOTOR BRACKET ASSY	T	Fig.2-1-21	3(S20),(L20a),2(L20b)	**NOTE 20**	ADJUSTMENT
[21]	GUIDE RAIL ASSY	T		2(W21),(S21),2(L21a),(L21b)	**NOTE 21**	ADJUSTMENT
[22]	SLIDE LEVER 2 ASSY	T		-	**NOTE 22**	ADJUSTMENT / #
[23]	LOADING PLATE ASSY	T		(W23)	**NOTE 23**	ADJUSTMENT
[24]	MODE GEAR	T		-	**NOTE 24**	
[25]	EJECT LEVER	T		(W25)	**NOTE 25**	ADJUSTMENT
[26]	BASE R ASSY	T	Fig.2-1-22	(S26a),(S26b),2(L26)	**NOTE 26**	ADJUSTMENT
[27]	ROTARY ENCODER	T		2(S27)	**NOTE 27**	PHASE ADJUSTMENT
[28]	GEAR COVER ASSY	T		(S28a),2(S28b)	-	
[29]	MAIN CAM ASSY	T		-	**NOTE 29**	PHASE ADJUSTMENT
[30]	SLIDE ARM ASSY	T	Fig.2-1-23	-	**NOTE 30**	ADJUSTMENT
[31]	CONNECT GEAR 2	T		-	**NOTE 31**	
[32]	SUB CAM ASSY	T		(S32)	**NOTE 32**	PHASE ADJUSTMENT
[33]	CONTROL ARM ASSY	T		-	**NOTE 33**	ADJUSTMENT
[34]	REEL GEAR 1	T		-	**NOTE 34**	
[35] / [36]	DRUM BASE ASSY/ CAPSTAN MOTOR	T	Fig.2-1-24	3(S35)	**NOTE 35a,b**	ADJUSTMENT
[36]	CAPSTAN MOTOR	T		(S36)	**NOTE 36**	ADJUSTMENT
[37]	MAIN DECK ASSY	T		-	-	

Fig.2-1-10


2
(S1)
[1]
1
(S1)
4
(S2)
(W4)
[4]
(W5a)
[2]
8
(S6a)
[5]
(W6)
(W5b)
10
(S6b)
9
(S6a)
[3]
14
(S11b)
[6]
[9]
28
(S35)
30
(S36)
[7]
27
(S35)
29
(S35)
[8]
11
(S10)
[10]
(P8)
12
(S11a)
[35]
(W12)
13
(S11a)
7
(S3b)
[12]
5
(S3a)
(P12)
(W23)
[11]
6
(S3b)
(W14)
[23]
3
(S1)
[22]
(P14)
21
(S27)
[14]
(W21)
[36]
16
(S20)
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22
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17
(S20)
[20]
[27]
18
(S21)
[17]
[18]
[30]
[34]
[21]
[24]
20
(S26b)
(W15)
23
(S28a)
25
(S28b)
[16]
(W25)
24
(S28b)
[19]
[25]
[15]
19
(S26a)
[28]
26
(S32)
[29]
[37]
[26]
[32]
[31]
[33]

Fig.2-1-11

< TOP VIEW >

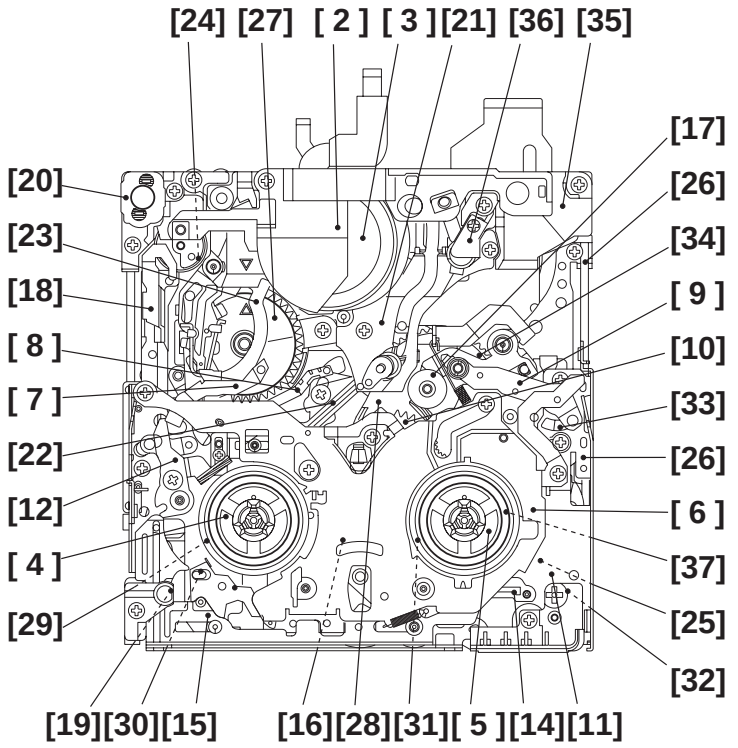


Fig.2-1-12

< BOTTOM VIEW >

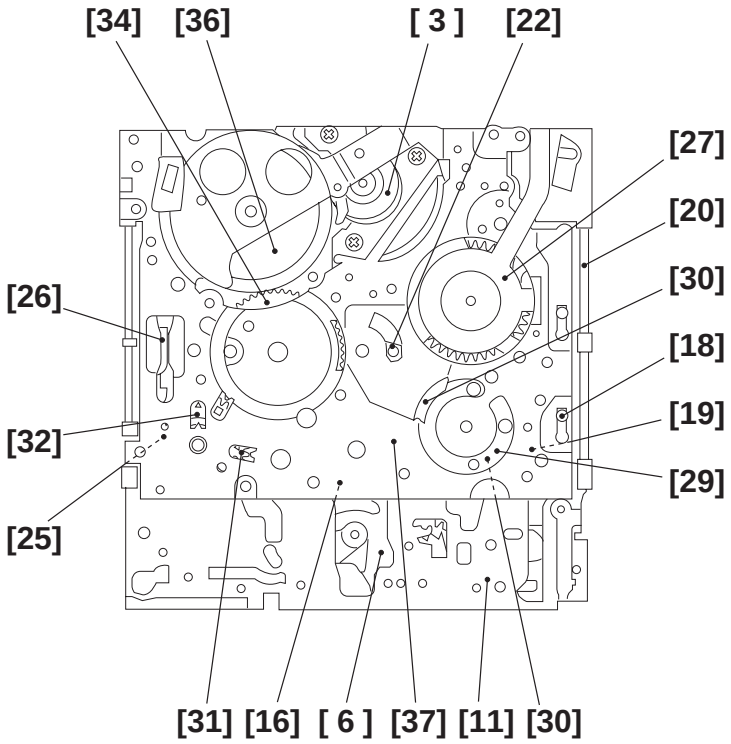


Fig.2-1-13

2.1.5 DISASSEMBLY/ASSEMBLY

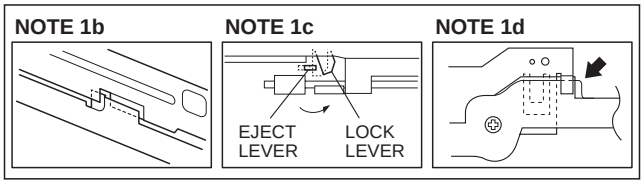
2.1.5.1 [1] CASSETTE HOUSING ASSY

NOTE 1a:
Be careful not to damage any of the parts during work.

NOTE 1b:
Special care is required in mounting.

NOTE 1c:
When mounting, the CASSETTE HOUSING ASSY should be attached in the Eject status. Pay heed to the positions of the LOCK LEVER and EJECT LEVER during mounting.

NOTE 1d:
When mounting, be sure to locate the FPC in the gap.



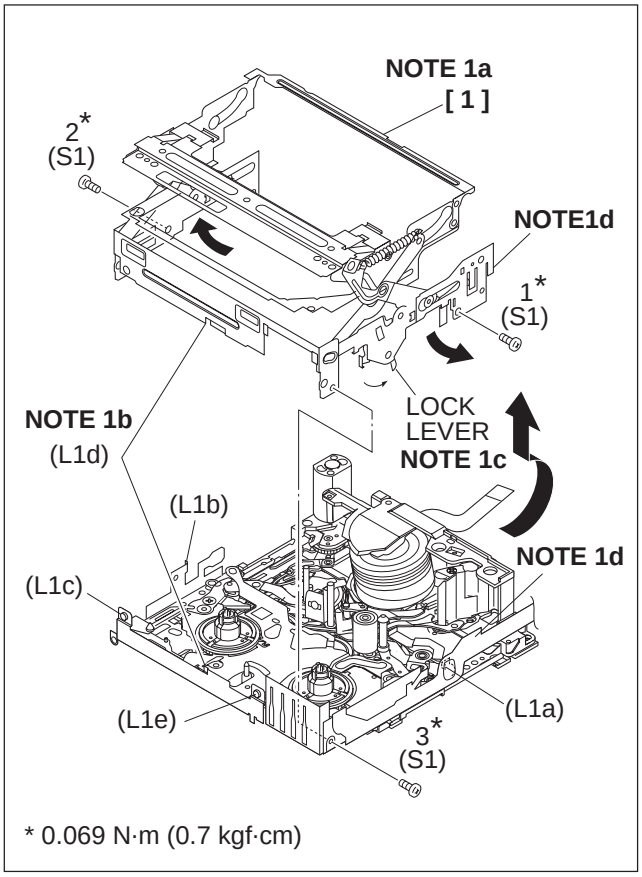


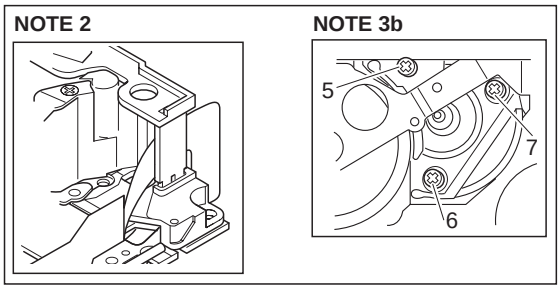
Fig.2-1-14

2.1.5.2 [2] UPPER BASE ASSY
[3] DRUM ASSY

NOTE 2:
When mounting, be sure to insert the FPC reinforcing sheet.

NOTE 3a:
Be mindful of scratches or damage during work.

NOTE 3b:
Be careful not to attach screws incorrectly.



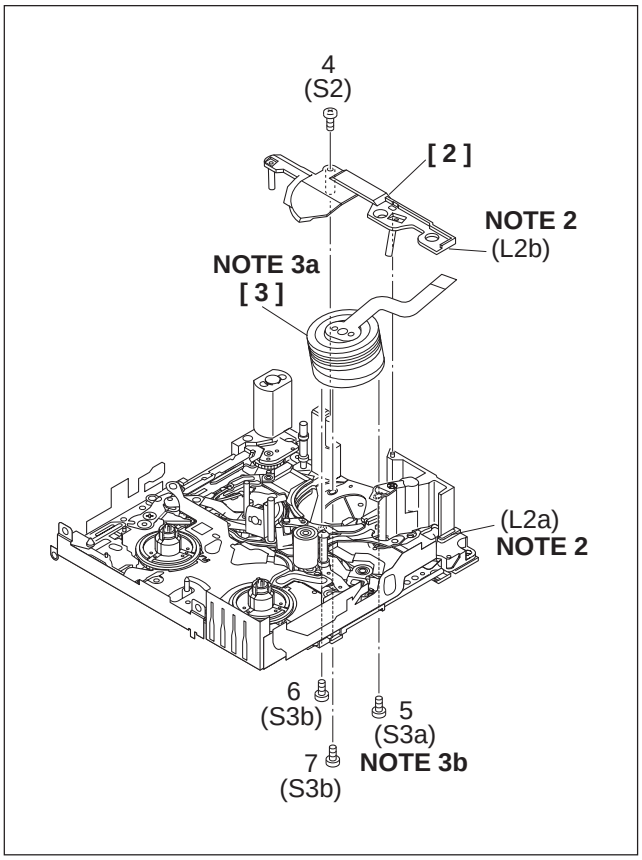


Fig.2-1-15

2.1.5.3 [4] REEL DISK ASSY(SUP)
[5] REEL DISK ASSY(TU)
[6] REEL COVER ASSY

NOTE 4:

Be careful not to attach the REEL DISK wrongly. The Supply side can be identified by the white color at the center.

NOTE 5a:

Be careful not to attach the REEL DISK wrongly. The Take-up side can be identified by the black color at the center.

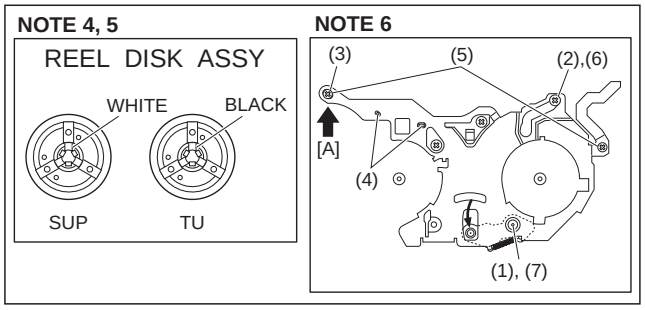
NOTE 5b

The washer is inserted under the REEL DISK.
Be carefull not to lose the washer.
Two washers are inserted under the REEL DISK in some products manufactured earlier, but one washer is inserted in the products manufactured recently and in the future.
See the parts list, and use the parts written in the parts list.

NOTE 6:

Perform the following steps for mounting.

(1) Align the hole with the pin.
(2) Attach the **[17]** PINCH ROLLER ARM FINAL ASSY by aligning the positions.
(3) Attach the SLIDE DECK ASSY (POINT[A]) by aligning the positions.
(4) Check that the parts below them are located in the correct positions.
(5) Tighten the 2 screws.
(6) Tighten the screw.
(7) Attach the 1 SLIT WASHER parts.



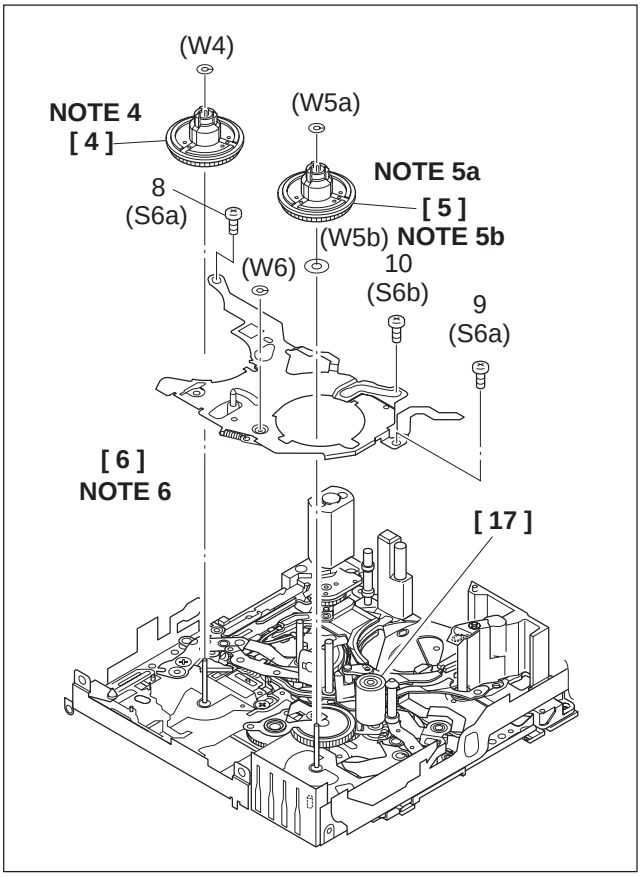


Fig.2-1-16

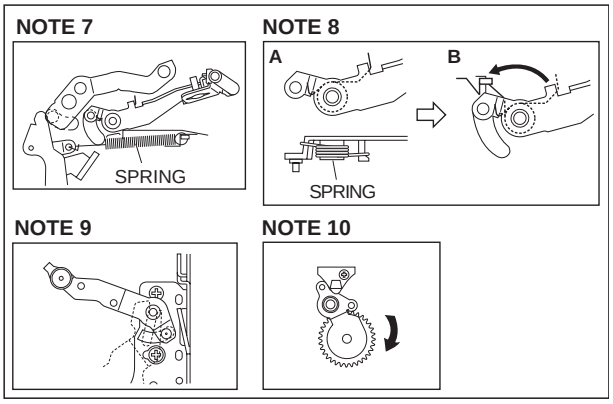
2.1.5.4 [7] TENSION ARM ASSY
[8] SLANT POLE ARM ASSY
[9] TU ARM ASSY
[10] SWING ARM ASSY

NOTE 7:
When detaching, remove the spring of the **[12]** PAD ARM ASSY in advance.
Pay attention to the attachment position.

NOTE 8:
When mounting the SLANT POLE ARM ASSY, hook the spring onto the lug as in diagram A, and fit the combination onto the SLIDE DECK ASSY. After fitting, hook the spring onto the lug of the SLIDE DECK ASSY as in diagram B.
Be careful not to lose the spring.

NOTE 9:
Pay attention to the attachment position.

NOTE 10:
When detaching, remove the screw then remove the SWING ARM ASSY by pulling it up and turning it.



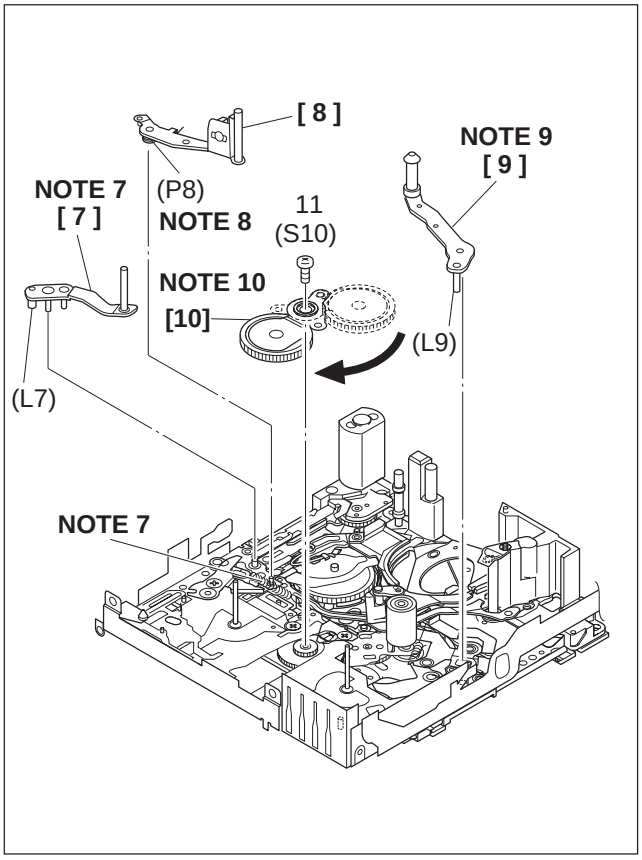


Fig.2-1-17

2.1.5.5 [11] SLIDE DECK ASSY

NOTE 11a:

Each of the parts on the SLIDE DECK ASSY can be replaced separately.

When detaching the assembly, if there is no need to replace any of its parts, remove the SLIDE DECK ASSY as it is.

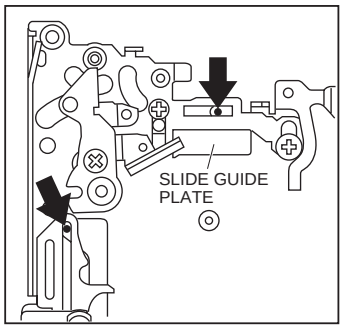
NOTE 11b:

When mounting, pay attention to the positions of the **[22]** SLIDE LEVER 2 ASSY studs and the **[19]** BRAKE CTL LEVER ASSY.

When mounting, position the CONTROL PLATE on the left side.

Pay attention to the position of the SLIDE GUIDE PLATE during mounting.

NOTE 11b



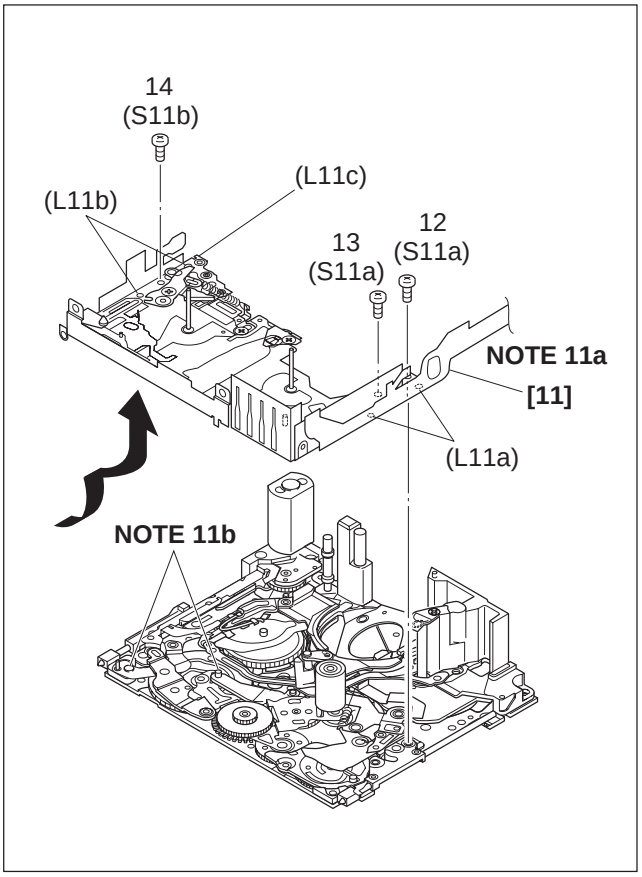


Fig.2-1-18

2.1.5.6 [12] PAD ARM ASSY
[13] -
[14] TU BRAKE ASSY

NOTE 12:

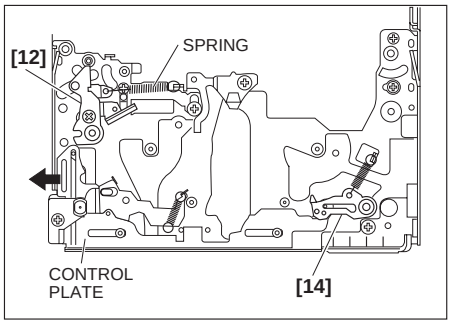
The spring may have already been disengaged when the **[8]** SLANT POLE ARM ASSY was removed.

NOTES 14:

When mounting, pay attention to the correct positioning.

Mount the CONTROL PLATE by moving it fully toward the left side.

NOTE 12,14



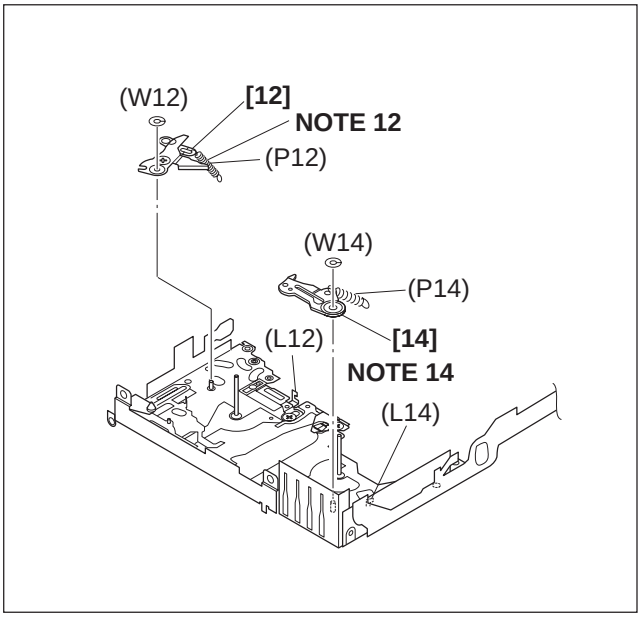


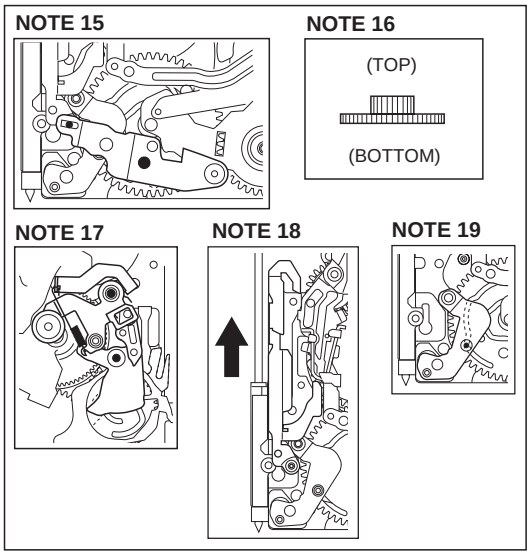
Fig.2-1-19

2.1.5.7 [15] TENSION CTL LEVER ASSY
[16] CENTER GEAR
[17] PINCH ROLLER ARM FINAL ASSY
[18] TENSION CTL PLATE ASSY
[19] BRAKE CTL LEVER ASSY

NOTES 15/16:
When mounting, pay attention to the correct positioning.

NOTE 17:
Take care against grease attachment during work.

NOTES 18/19:
When mounting, pay attention to the correct positioning.



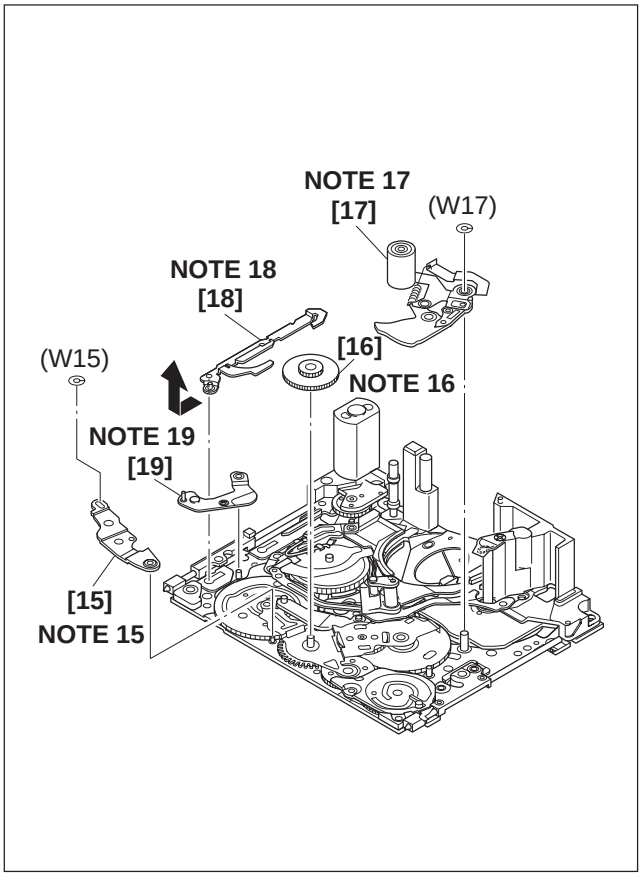


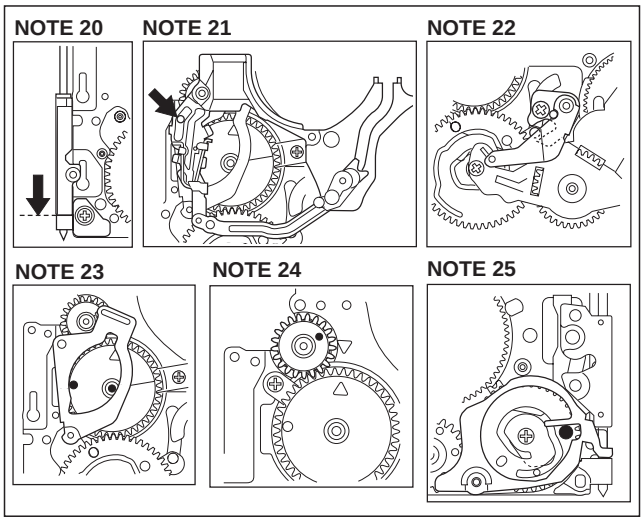
Fig.2-1-20

2.1.5.8 [20] MOTOR BRACKET ASSY
[21] GUIDE RAIL ASSY
[22] SLIDE LEVER 2 ASSY
[23] LOADING PLATE ASSY
[24] MODE GEAR
[25] EJECT LEVER

NOTE 20:
When mounting, pay attention to the positioning of the sliding parts.

NOTE 21:
When mounting, take care that no part is allowed to float or rattle.

NOTES 22/23/24/25:
When mounting, pay attention to the correct positioning.



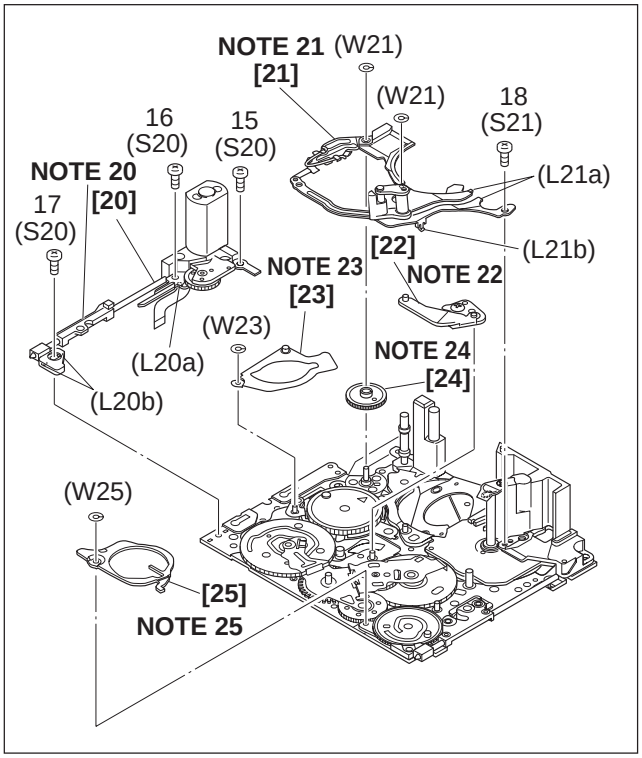


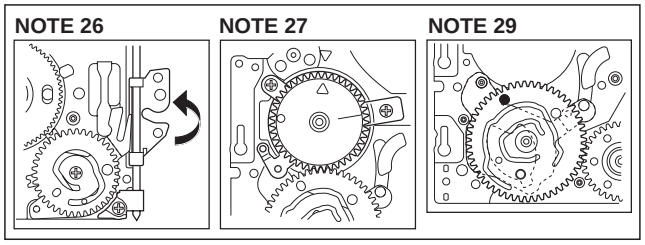
Fig.2-1-21

2.1.5.9 [26] BASE R ASSY
[27] ROTARY ENCODER
[28] GEAR COVER ASSY
[29] MAIN CAM ASSY

NOTE 26:
When mounting, fold the sliding part to the inner side.

NOTE 27:
When mounting, pay attention to the correct positioning and the FPC layout.

NOTE 29:
When mounting, pay attention to the correct positioning.



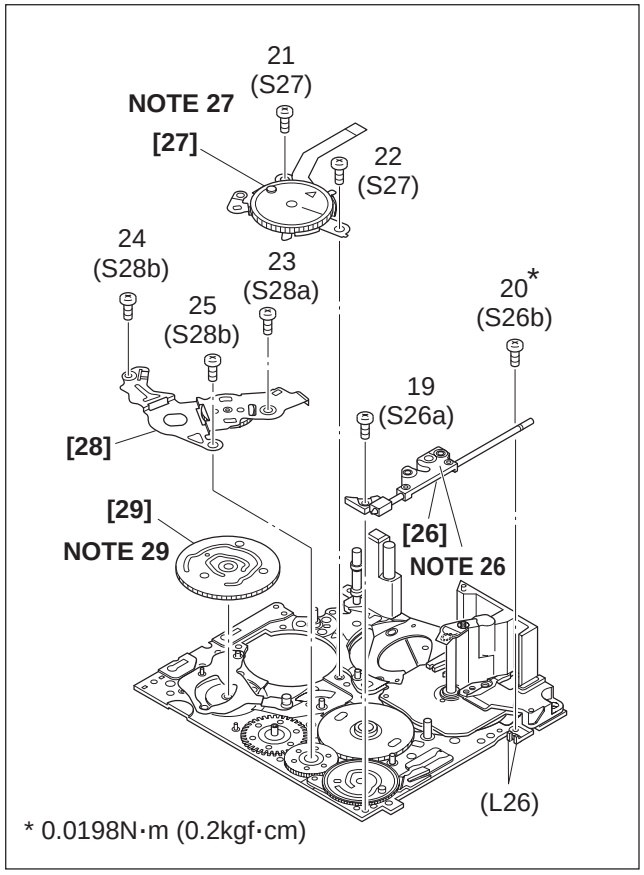


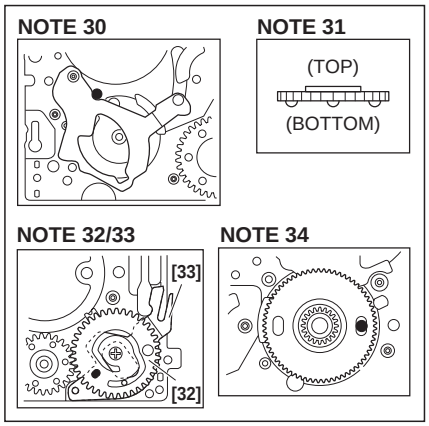
Fig.2-1-22

2.1.5.10 [30] SLIDE ARM ASSY
[31] CONNECT GEAR 2
[32] SUB CAM ASSY
[33] CONTROL ARM ASSY
[34] REEL GEAR 1

NOTE 30:
When mounting, pay attention to the correct positioning.

NOTE 31:
When mounting, pay attention to the position of the front and back.

NOTES 32/33/34:
When mounting, pay attention to the correct positioning.



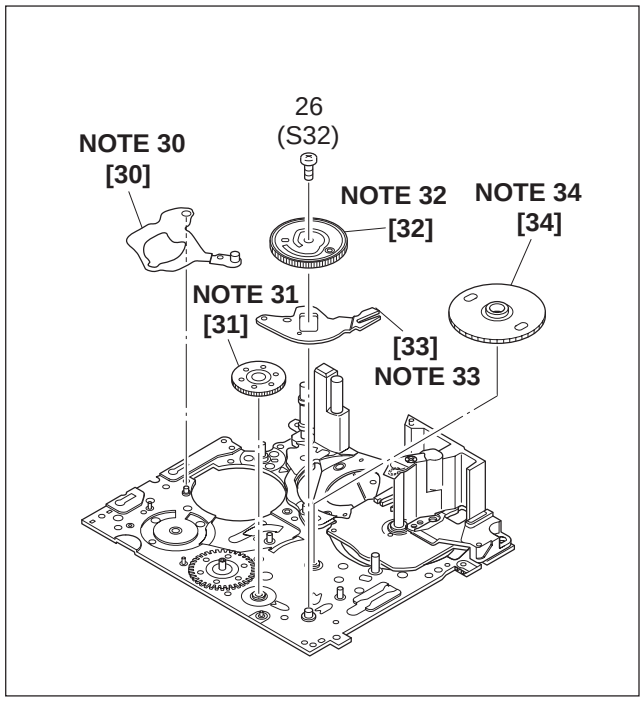


Fig.2-1-23

2.1.5.11 [35] DRUM BASE ASSY
[36] CAPSTAN MOTOR
[37] MAIN DECK ASSY

NOTES 35a/36:

Since [36]CAPSTAN MOTOR is attached to [35]DRUM BASE ASSY, remove [36]CAPSTAN MOTOR together with [35]DRUM BASE ASSY when removing [36]CAPSTAN MOTOR.

[36]CAPSTAN MOTOR should not be separated from [35]DRUM BASE ASSY except when replacing them.

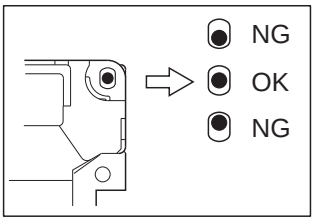
NOTE 35b:

It is very important to attach [35]DRUM BASE ASSY to the proper position.

Especially, improper engagement of [36]CAPSTAN MOTOR with [34]REEL GEAR 1 causes operational defection or abnormal sound. Therefore, confirm the attachment position before disassembly procedure.

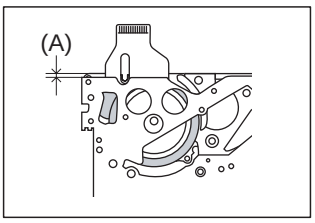
See the following figure as for the proper attachment position.

NOTE 35b



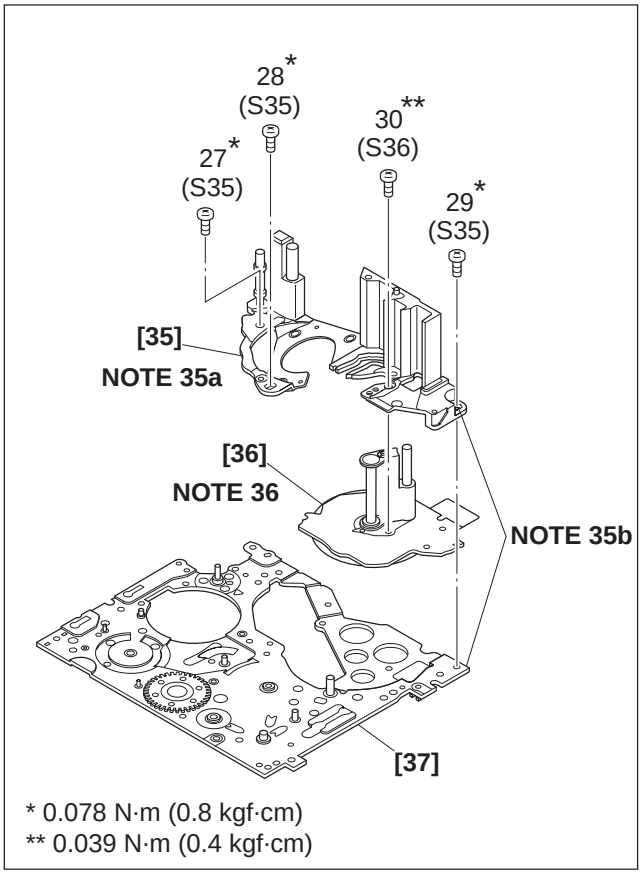
When [35]DRUM BASE ASSY is properly attached, the screw hole tends to be located at the center of the oval.

When the screw hole is located far from the center of the oval, operational defection or abnormal sound may occur.



Before removing [35]DRUM BASE ASSY, confirm the position of [35]DRUM BASE ASSY by seeing the length (A), as shown in the left figure.

When reattaching [35]DRUM BASE ASSY, confirm the position to reattach [35]DRUM BASE ASSY by seeing the length (A). Be sure to reattach [35]DRUM BASE ASSY to the same position as it has been before the removing procedure.



* 0.078 N·m (0.8 kgf·cm)
** 0.039 N·m (0.4 kgf·cm)

Fig.2-1-24

2.1.6 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE

[24]MODE GEAR

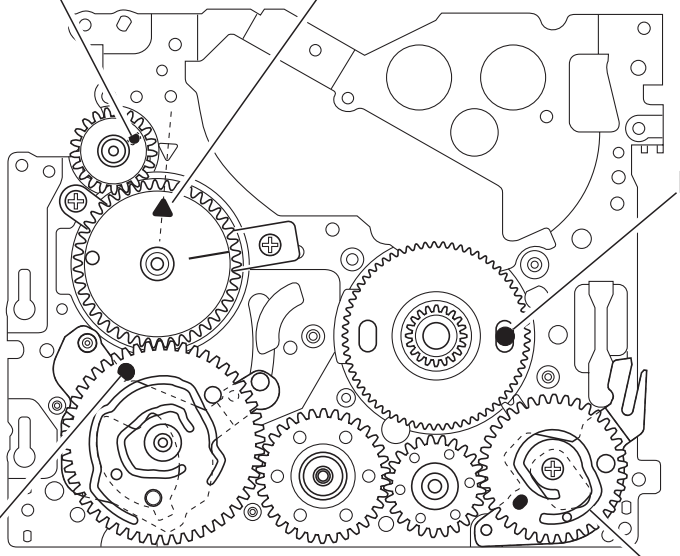
Align the MODE GEAR with the Main Deck Assembly hole.

Note:
The MODE GEAR may be displaced during the mechanism operation, however it can be checked from the rear and realigned during manual assembly.

[27]ROTARY ENCODER

Mount the ROTARY ENCODER by aligning its mark (△) and the mark (▽) of the Main Deck Assembly.

Note:
Be careful when handling the FPC during mounting.



[34]REEL GEAR 1

Align the REEL GEAR 1 with the Main Deck Assembly hole.

Note:
The REEL GEAR 1 may be displaced during mechanism operation, however this can be checked from the rear and realigned during manual assembly.

[29]MAIN CAM ASSY/[30]SLIDE ARM ASSY

When mounting the SLIDE ARM ASSY align it with the Main Deck Assembly and MAIN CAM ASSY holes.

Note:
During the mounting procedure, make sure that the[32] SUB CAM ASSY is in the correct mounting position.

[32]SUB CAM ASSY/[33] CONTROL ARM ASSY

Mount the SUB CAM ASSY hole to align with the CONTROL ARM ASSY and Main Deck Assembly holes and then tighten them all together with a screw.

Note:
When mounting it, make sure that the[29]MAIN CAM ASSY is in the correct mounting position.

Fig.2-1-25

2.1.7 MECHANISM ADJUSTMENTS

2.1.7.1 Adjustment of the slide guide plate

Use Fig. 2-1-26 as the reference unless otherwise specified.

(1) Set the PLAY mode. See Fig. 2-1-8.
(2) Loosen the screws (**A**, **B**).
(3) With the Main Deck and Slide Deck Assemblies pushed into the unit, tighten the screws (**A**, **B**) while applying pressure to the stud (shaft) on the Slide Guide plate.
The pressure applied should be enough to enable utilization of the rebounding force of the springs.
The tightening torque should be 0.069 N•m (0.7 kgf•cm).
(4) Check the operation.
Repeat unloading and loading several times and make sure that these operations can be performed smoothly without producing rattles.

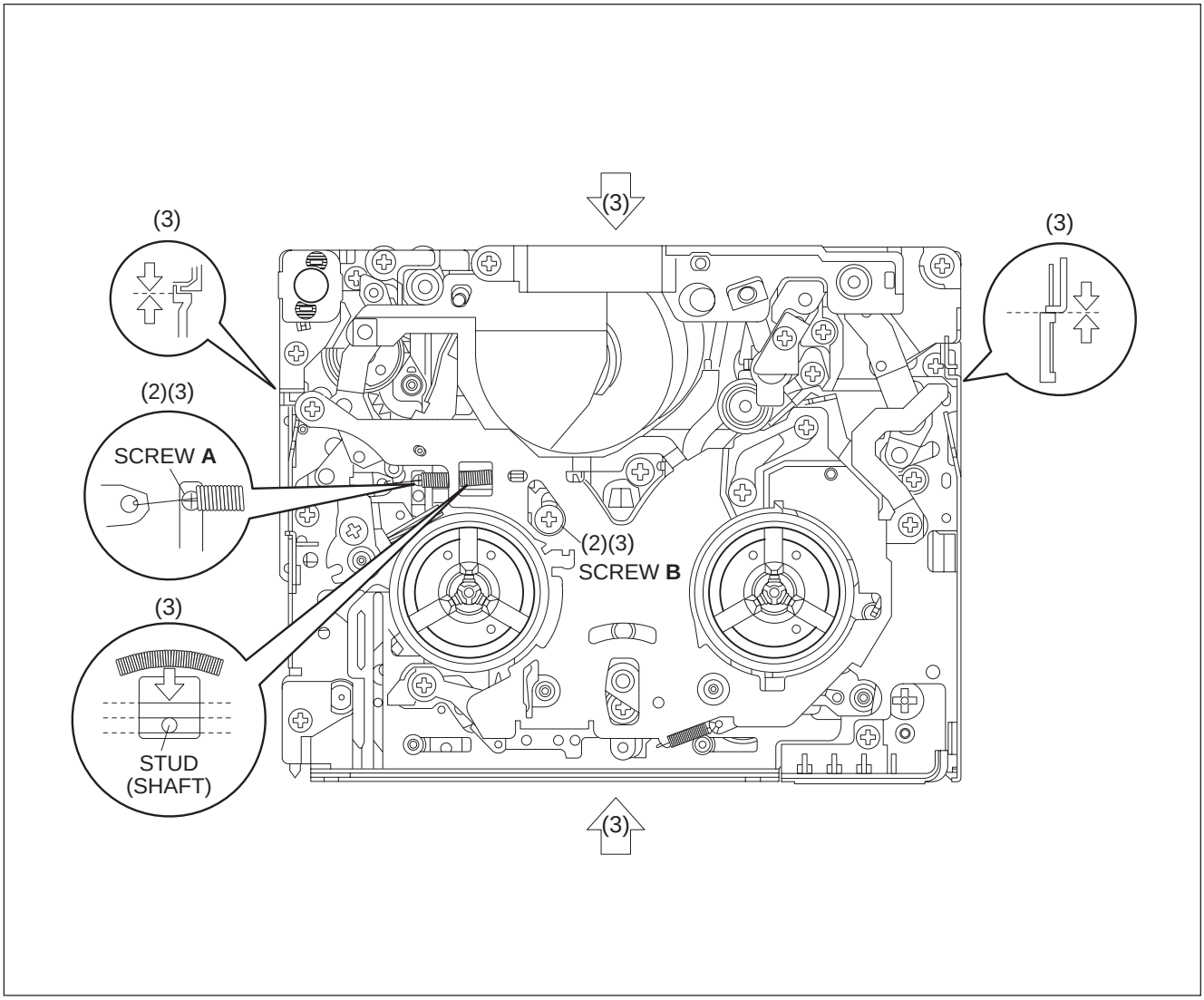


Fig.2-1-26

2.1.7.2 Adjustment of the Tension Arm and Pad Arm Assemblies

Use Fig. 2-1-27 as the reference unless otherwise specified.

(1) Set the PLAY mode.
See Fig. 2-1-8.
(2) Loosen the screw **A**.
(3) With the take-up side at the bottom, align the extreme end of the Tension Arm Assembly with the crossed grooves on the screw **B** that retains the Loading Motor Assembly and then tighten the screw **A**.
The tightening torque should be 0.069 N•m (0.7 kgf•cm).
(4) Check the operation.
Repeat unloading and loading several times and make sure that the Tension Arm Assembly is located within the normal range.

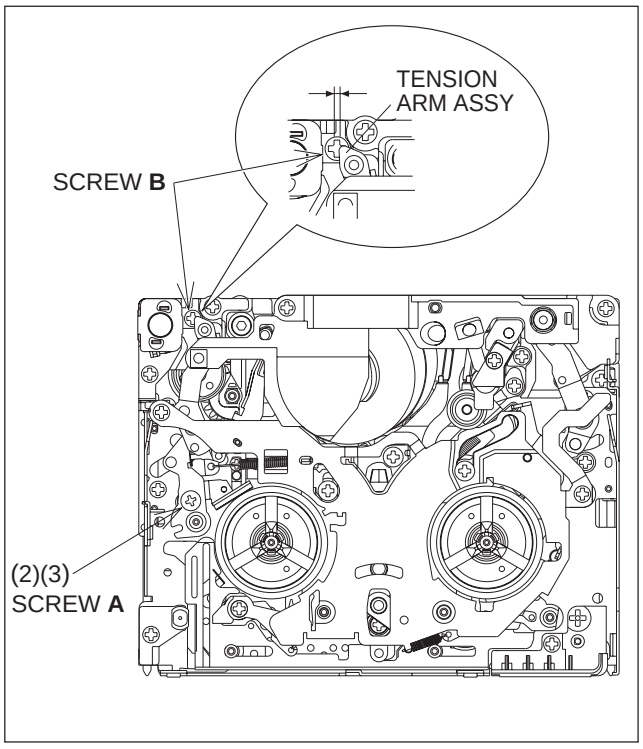


Fig.2-1-27

2.1.7.3 Adjustment of the Slide Lever 2

Use Fig. 2-1-28 as the reference unless otherwise specified.

(1) Set the C IN mode.
See Fig. 2-1-4.
(2) Loosen the screw **A**.
(3) Set the Main Deck and Slide Deck Assemblies apart so that they do not rattle, then tighten the screw **A** by screwing it fully toward the Drum Assembly.
The tightening torque should be 0.069 N•m (0.7 kgf•cm).
(4) Check the operation.
Repeat unloading and loading several times and make sure that these operations can be performed smoothly without producing rattles.

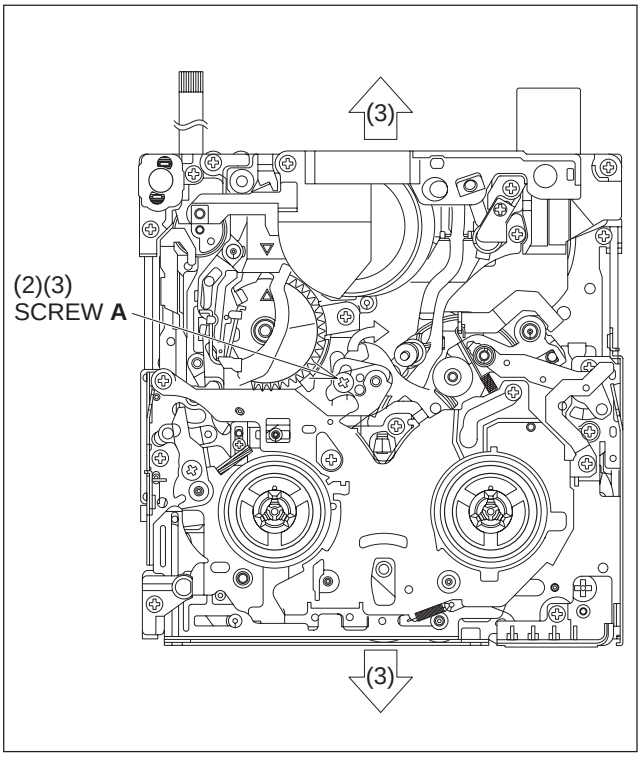


Fig.2-1-28

2.1.8 SERVICE NOTE

Use the following chart to manage mechanism parts that are removed for disassembling the mechanism.

Fig.2-1-14

[1] CASSETTE HOUSING ASSY

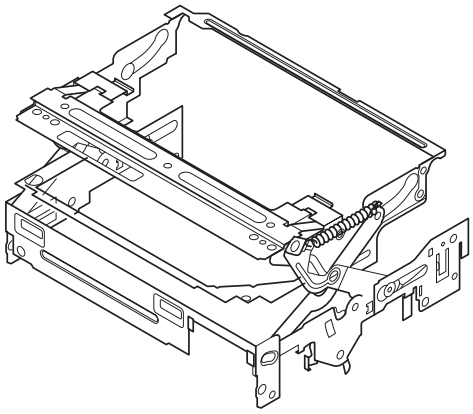


Fig.2-1-15

[2] UPPER BASE ASSY

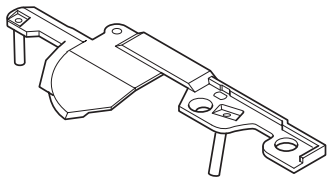


Fig.2-1-15

[3] DRUM ASSY

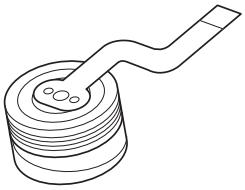
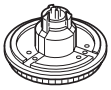
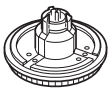


Fig.2-1-16

[4] REEL DISK ASSY(SUP)



[5] REEL DISK ASSY(TU)



[6] REEL COVER ASSY

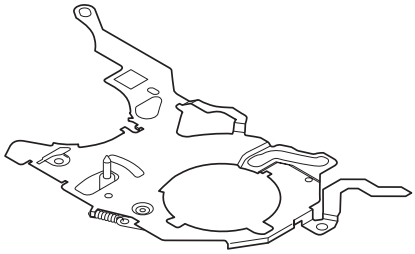
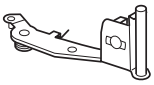


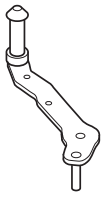
Fig.2-1-17

[7] TENSION ARM ASSY

[8] SLANT POLE ARM ASSY



[9] TU ARM ASSY



[10] SWING ARM ASSY

Fig.2-1-18

[11] SLIDE DECK ASSY

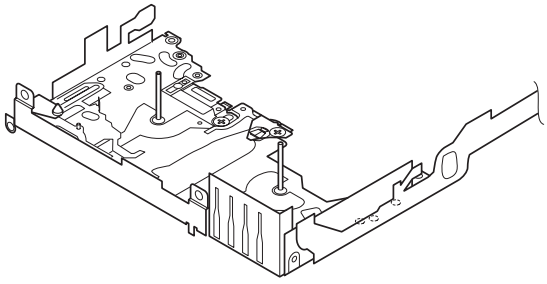


Fig.2-1-19

[12] PAD ARM ASSY

[13]

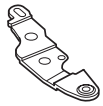
—

[14] TU BRAKE ASSY

Fig.2-1-29

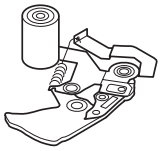
Fig.2-1-20

[15] TENSION CTL LEVER ASSY

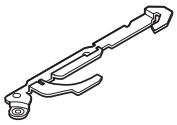


[16] CENTER GEAR

[17] PINCH ROLLER ARM F. ASSY



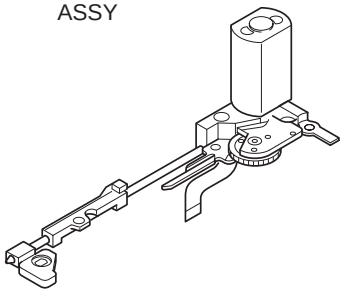
[18] TENSION CTL PLATE ASSY



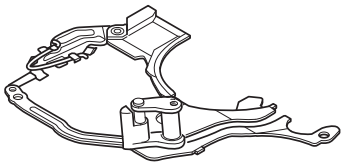
[19] BRAKE CTL LEVER ASSY

Fig.2-1-21

[20] MOTOR BRACKET ASSY



[21] GUIDE RAIL ASSY



[22] SLIDE LEVER 2 ASSY

[23] LOADING PLATE ASSY

[24] MODE GEAR

[25] EJECT LEVER

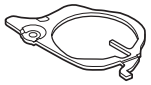
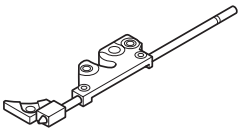
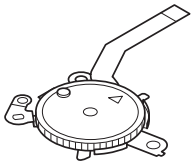


Fig.2-1-22

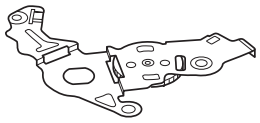
[26] BASE R ASSY



[27] ROTARY ENCODER



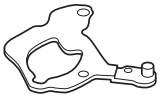
[28] GEAR COVER ASSY



[29] MAIN CAM ASSY

Fig.2-1-23

[30] SLIDE ARM ASSY



[31] CONNECT GEAR 2

[32] SUB CAM ASSY

[33] CONTROL ARM ASSY

[34] REEL GEAR 1

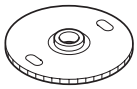
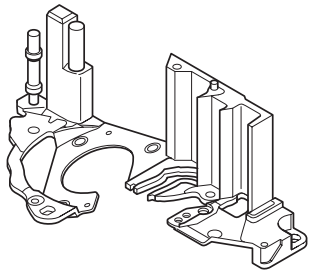
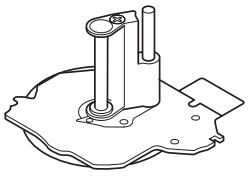


Fig.2-1-24

[35] DRUM BASE ASSY



[36] CAPSTAN MOTOR



[37] MAIN DECK ASSY

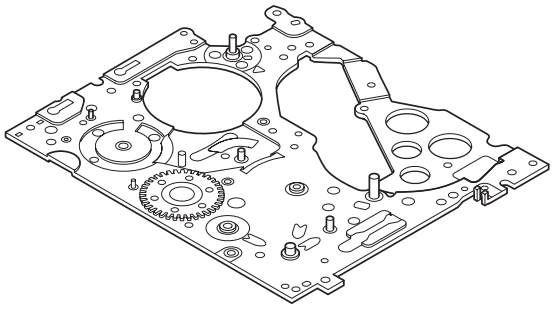


Fig.2-1-30

2.1.9 SERVICE NOTE

Use the following chart to manage screws.

Symbol No.	[1]			[2]	[3]			[6]			[10]	[11]			[20]			[21]	[22]	
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Place to stick screw																				
Reference drawing (Fig. No.2-1-**)	14				15				16		17		18			21			22	
Screw tightening torque	Ⅰ				Ⅱ															Ⅲ

Symbol No.	[27]			[28]			[32]	[35]			[36]
Removing order of screw	21	22	23	24	25	26	27	28	29	30	
Place to stick screw											
Reference drawing (Fig. No.2-1-**)	22					23	24				
Screw tightening torque	Ⅱ						Ⅳ			Ⅴ	

<NOTE>

·Pay careful attention to tightening torque for each screw.

Ⅰ : 0.069N·m(0.7kgf·cm)　　Ⅱ : 0.055N·m(0.56kgf·cm)　　Ⅲ : 0.0198N·m(0.2kgf·cm)

Ⅳ : 0.078N·m(0.8kgf·cm)　　Ⅴ : 0.039N·m(0.4kgf·cm)

Fig.2-1-31

2.1.10 REMARKS

2.1.10.1 Cleaning

(1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

NOTE:
Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

(2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.

(3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

2.1.10.2 Applying oil and grease

(1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.

(2) For parts and points to apply oil and grease, refer to the exploded view of the 3.1 DVC MECHANISM ASSEMBLY. Fig.2-1-32 specifies oil and grease to be used.

(3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB
Grease (HANARL)	RX-410R	CC

specifies oil and grease to be used

Fig.2-1-32

2.2 VHS-C MECHANISM

2.2.1 Precautions

(1) When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.216 N•m (2.2 kgf•cm). Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.
(2) Be sure to disconnect the set from the power supply before fastening and soldering parts.
(3) When disconnecting/connecting wires, be careful not to get them and their connectors damaged.
(4) When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

Example

STEP/LOC. No.	PART NAME		FIG.	REMOVAL POINT	INSTALLATION ADJUSTMENT CONDITION NOTE
[1]	ROLLER BASE ASSEMBLY	T	M1	(S1)	–
[2]	TENSION ARM ASSEMBLY	T	M1	(P1), (W1a)	–
[3]	REEL DISC (SUP)	T	M1	(W1a), (W1b)	–
↑ *1	↑ *2	↑ *3	↑ *4	↑ *5	↑ *6

2.2.2 How to read the disassembly and assembly

*1 Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.
*2 Part to Name be removed or installed.
*3 Location of part.

T = The Upper side
B = The Lower side

*4 Fig. No. showing Procedure or Part Location.
M = Mechanism
*5 Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.

P = Spring
W = Washer
S = Screw
* = Unhook, unlock, release, unplug or unsolder.

Example

- Remove (W1)=Washer W1.
- Remove the solder at (SD1)=Point SD1.
- Disconnect A = Connector A.

*6 Adjustment information for installation.
(+) = Refer to Exploded Views for Lubrication information.

2.2.3 DISASSEMBLY/ASSEMBLY PROCEDRURE TABLE

This procedure starts with the condition that the cabinet parts and deck parts. Also, all the following procedures for adjustment and parts replacement should be performed in STOP mode. When reassembling, perform the step(s) in the reverse order.

STEP/LOC. No.	PART NAME		FIG.	REMOVAL POINT	INSTALLATION ADJUSTMENT CONDITION NOTE
[1]	ROLLER BASE ASSY	T	M1	(1)	–
[2]	TENSION ARM ASSY	T	M1	(P1), (W1a)	–
[3]	REEL DISC	T	M1	(W1a), (W1b)	–
[4]	SLANT ARM ASSY	T	M1	(W1a)	–
[5]	CANCEL LEVER ASSY	T	M2	(W2)	–
[6]	EJECT LEVER ASSY	T	M2	(W2)	–
[7]	CASSETTE GUIDE (LEFT)	T	M2	(2)	–
[8]	SUPPLY CLUTCH ASSY	T	M2	(W2)	–
[9]	WHEEL GEAR	T	M2	(W2)	See, Adjustment procedure for Section 2.2.5
[10]	ROTARY ENCODER	B	M3	4(S3a)	The function of this part varies according to the ASSY (VHS/SVHS) which this part is rporated in. (Refer to fig. 2-2-6)
[11]	TIMING BELT	B	M3	–	–
[12]	CENTER PULLEY UNIT	T/B	M3	2(S3a)	–
[13]	CASSETTE GUIDE (R) ASSY	T	M3	(S3b), (P3)	(Only use SVHS model)
[14]	TAKE UP GEAR	T	M3	(W3a)	–
[15]	BRAKE SUB GEAR	T	M3	(W3a)	–
[16]	PINCH ROLLER ARM ASSY	T	M3	(W3b)	–
[17]	TAKE UP GUIDE ARM ASSY	T	M3	(W3a)	–
[18]	LINK ARM ASSY	T	M4	(W4)	–
[19]	LED GUIDE	T	M4	(S4a)	–
[20]	A/C HEAD UNIT	T	M4	2(S4b)	–
[21]	SLANT POLE BASE ASSY	T	M5	(S5a)	–
[22]	CAPSTAN MOTOR	T	M5	3(S5a)	–
[23]	MOTOR BASE	T	M5	2(S5b), (S5c)	–
[24]	BRUSH	B	M6	(S6a)	–
[25]	DRUM FINAL ASSY	T/B	M6	2(S6b), 2(S6c) *CATCHER	–
[26]	GUIDE RAIL	T	M6	7(S6d), 8(S6d)	(Refer to part list.)
[27]	POLE BASE (S)ASSY	T	M6	–	–
[28]	POLE BASE (T)ASSY	T	M6	–	–
[29]	COVER PLATE	T	M7	–	–
[30]	DRIVE LEVER ASSY	T	M7	–	–
[31]	MOTOR BRACKET ASSY	T	M7	3(S7)	–
[32]	CONTROL CAM	T	M8	(W8a)	See, Adjustment procedure for Section 2.2.5
[33]	LINK LEVER	T	M8	_	See, Adjustment procedure for Section 2.2.5
[34]	MIDDLE GEAR	T	M8	–	–
[35]	LOADING GEAR(T) ASSY	T	M8	(W8b)	See, Adjustment procedure for Section 2.2.5
[36]	LOADING GEAR(S) ASSY	T	M8	(W8b)	–
[37]	LOADING RING ASSY	T	M8	4(S8)	See, Adjustment procedure for Section 2.2.5

Fig.2-2-1

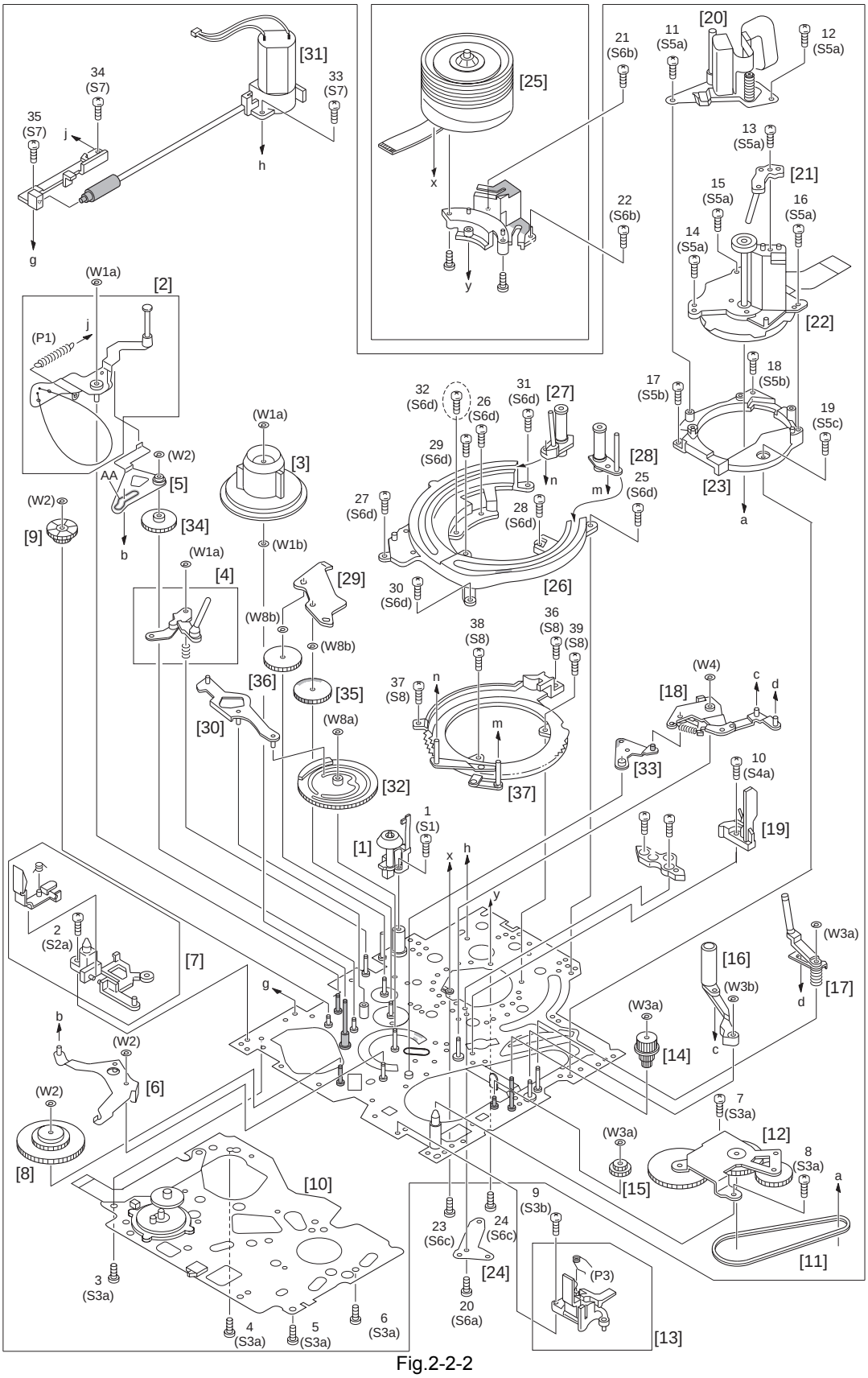

[31]
34 (S7)
33 (S7)
35 (S7)
j
h
g
[25]
x
y
21 (S6b)
22 (S6b)
[20]
11 (S5a)
12 (S5a)
13 (S5a)
[21]
15 (S5a)
16 (S5a)
14 (S5a)
[22]
(W1a)
[2]
(P1)
j
AA
(W2)
[5]
b
[34]
[9]
(W2)
(W1a)
[3]
(W1b)
[4]
[29]
(W8b)
(W8b)
[36]
[35]
[30]
(W8a)
[32]
32 (S6d)
26 (S6d)
31 (S6d)
[27]
29 (S6d)
n
[28]
m
25 (S6d)
27 (S6d)
28 (S6d)
[26]
30 (S6d)
17 (S5b)
18 (S5b)
19 (S5c)
[23]
a
38 (S8)
36 (S8)
39 (S8)
37 (S8)
n
m
[37]
(W4)
c
d
[18]
[33]
10 (S4a)
[19]
[1]
1 (S1)
x
h
y
2 (S2a)
[7]
g
b
(W2)
[6]
(W2)
[8]
[10]
3 (S3a)
4 (S3a)
5 (S3a)
6 (S3a)
23 (S6c)
24 (S6c)
9 (S3b)
[24]
20 (S6a)
(P3)
[13]
(W3a)
[16]
(W3b)
c
(W3a)
[14]
(W3a)
[17]
d
7 (S3a)
(W3a)
[15]
[12]
8 (S3a)
a
[11]

Fig.2-2-2

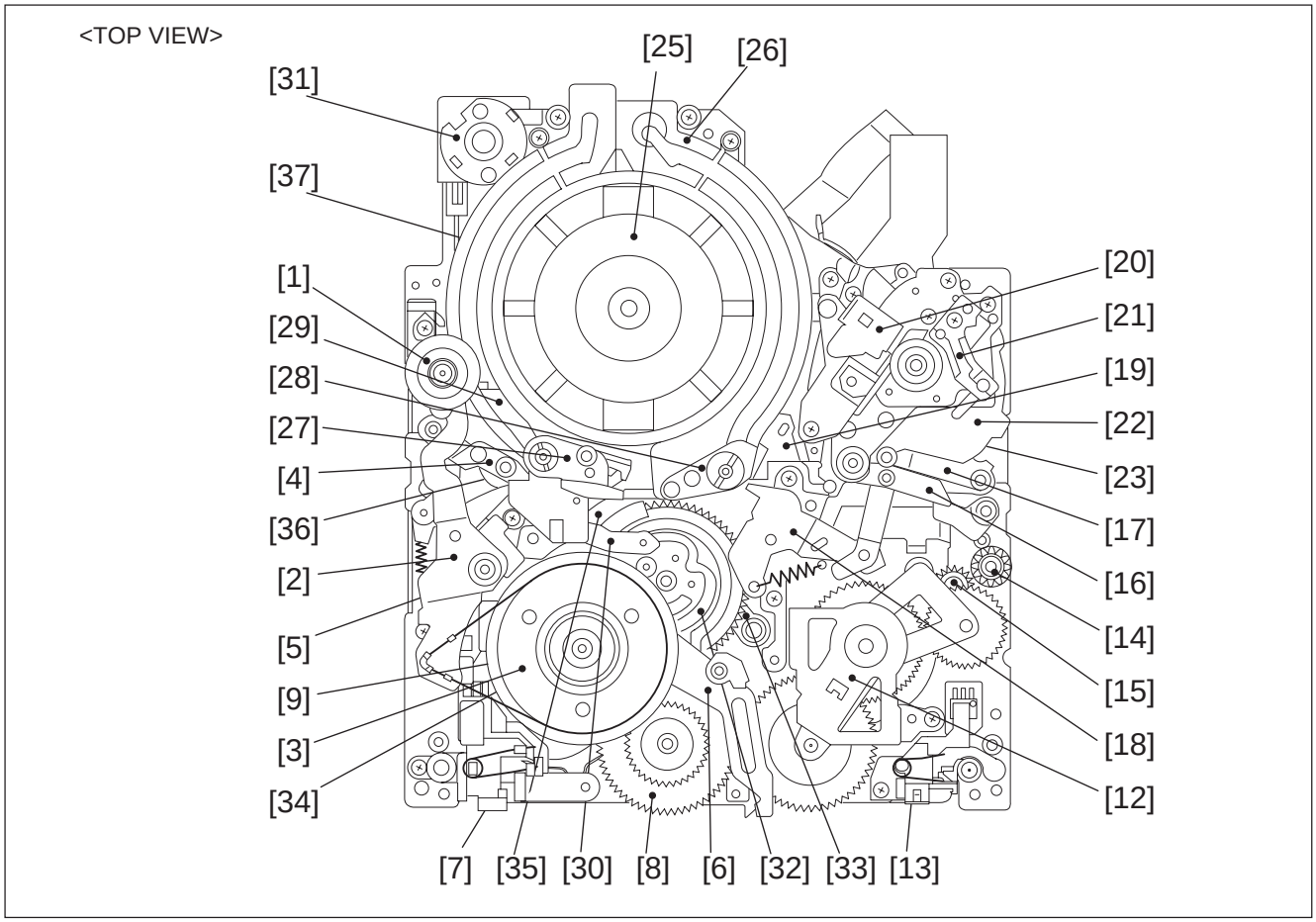


Fig.2-2-3

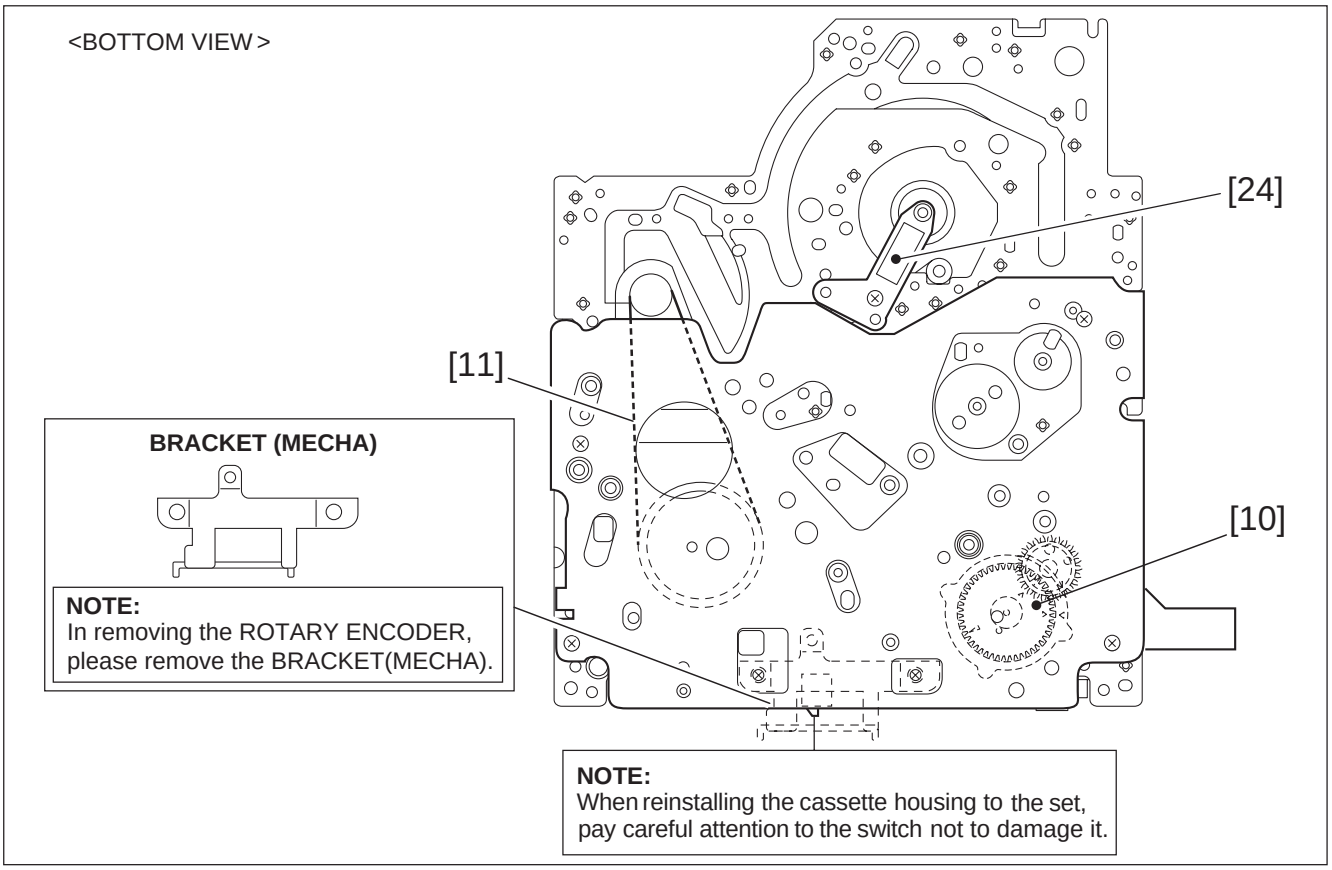

<BOTTOM VIEW>
[24]
[11]
[10]
BRACKET (MECHA)
NOTE:
In removing the ROTARY ENCODER, please remove the BRACKET(MECHA).
NOTE:
When reinstalling the cassette housing to the set, pay careful attention to the switch not to damage it.

Fig.2-2-4

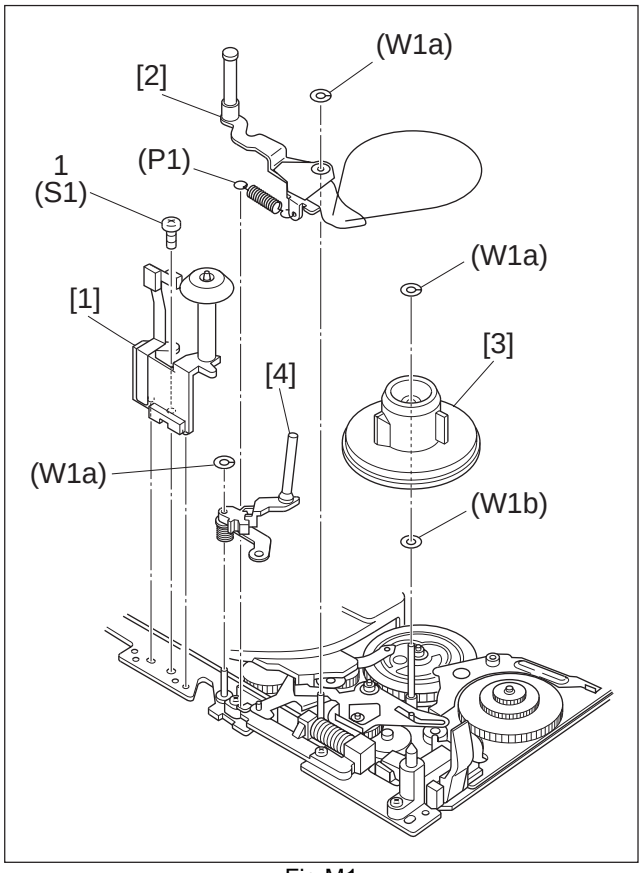


Fig.M1

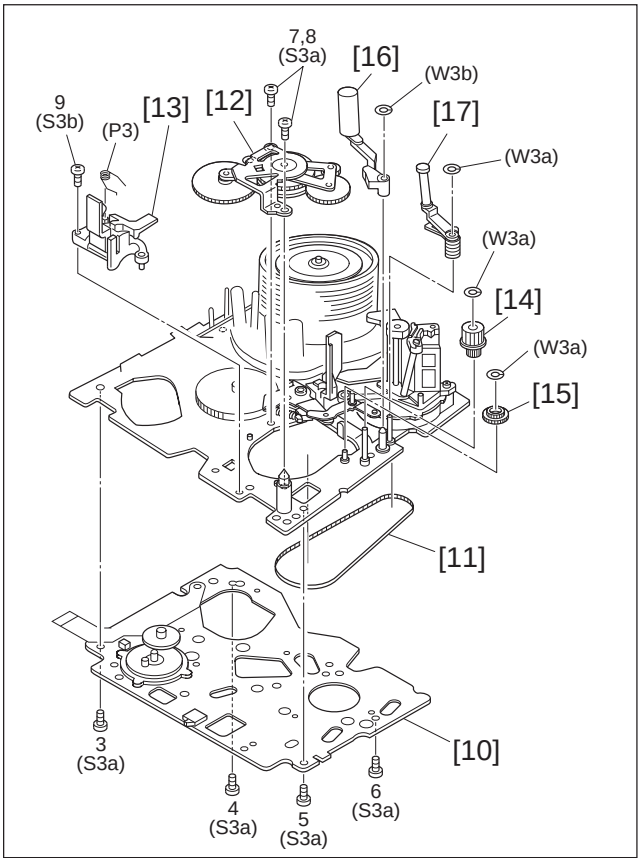


Fig.M3

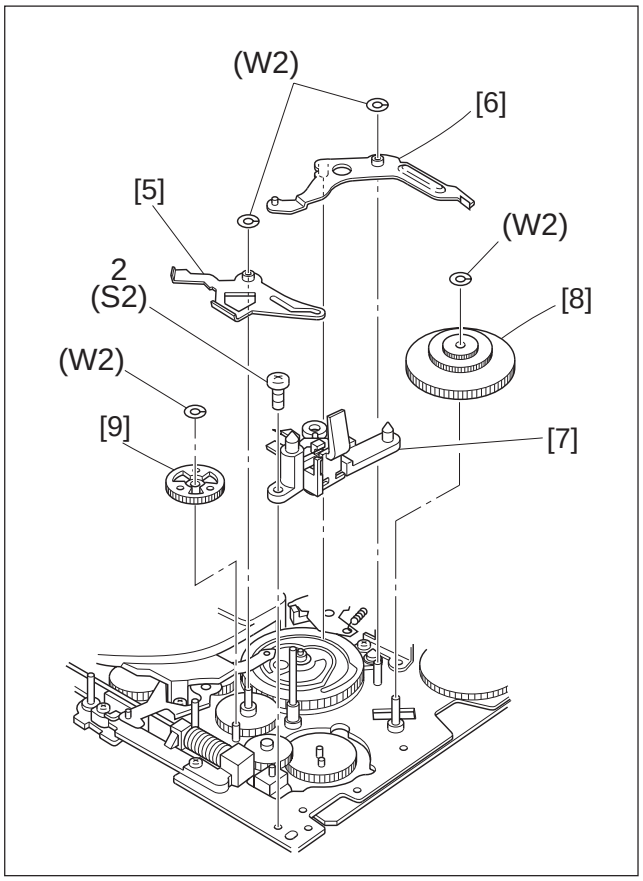


Fig.M2

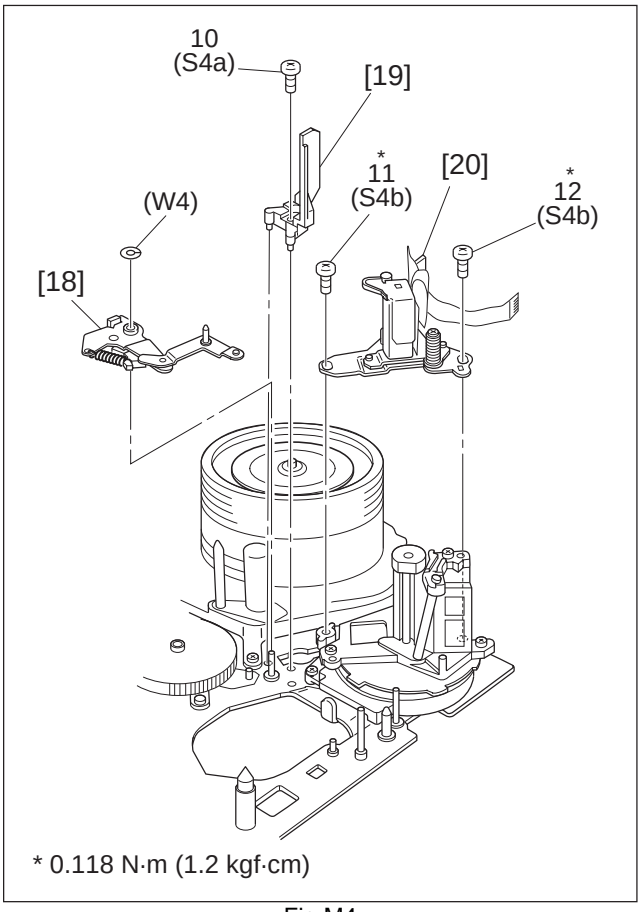


Fig.M4

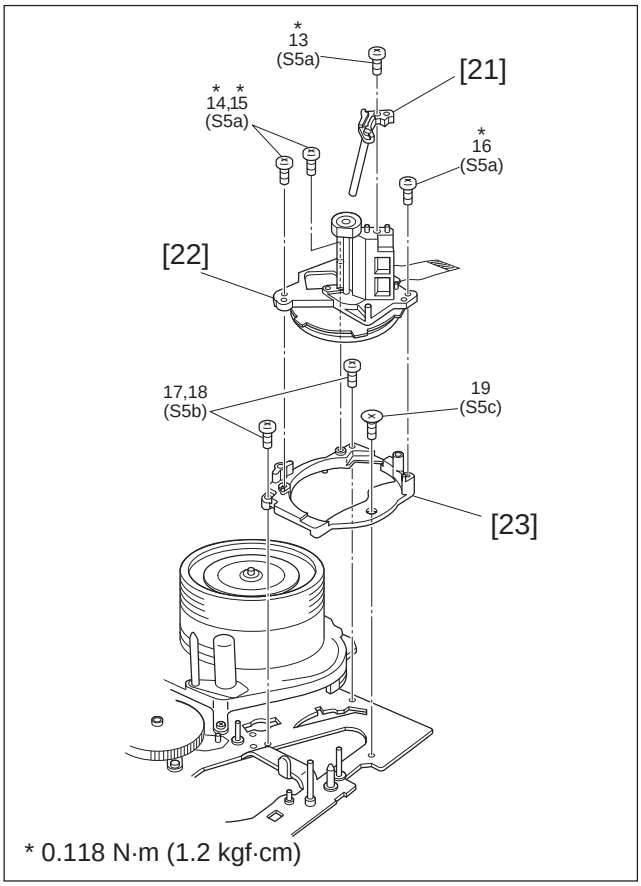


Fig.M5

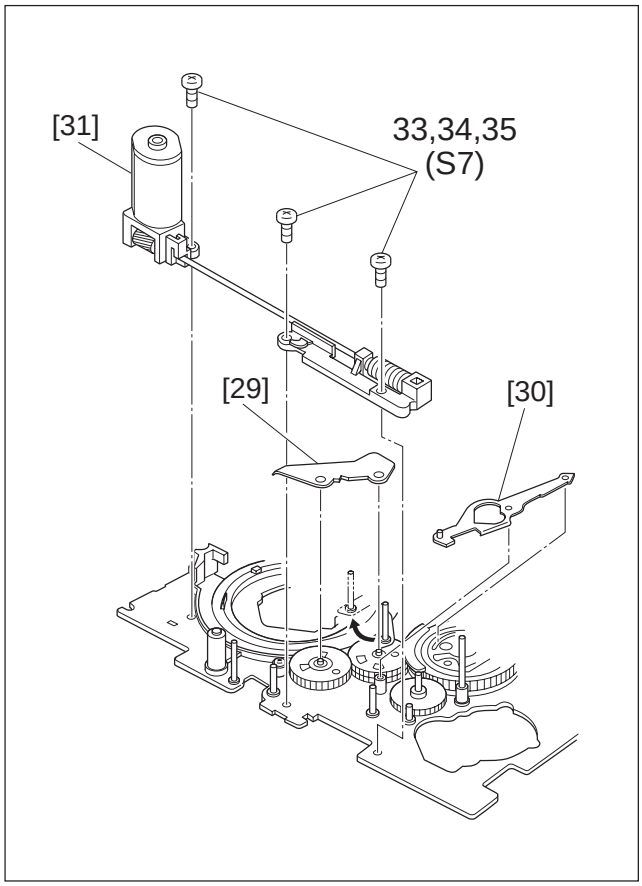


Fig.M7

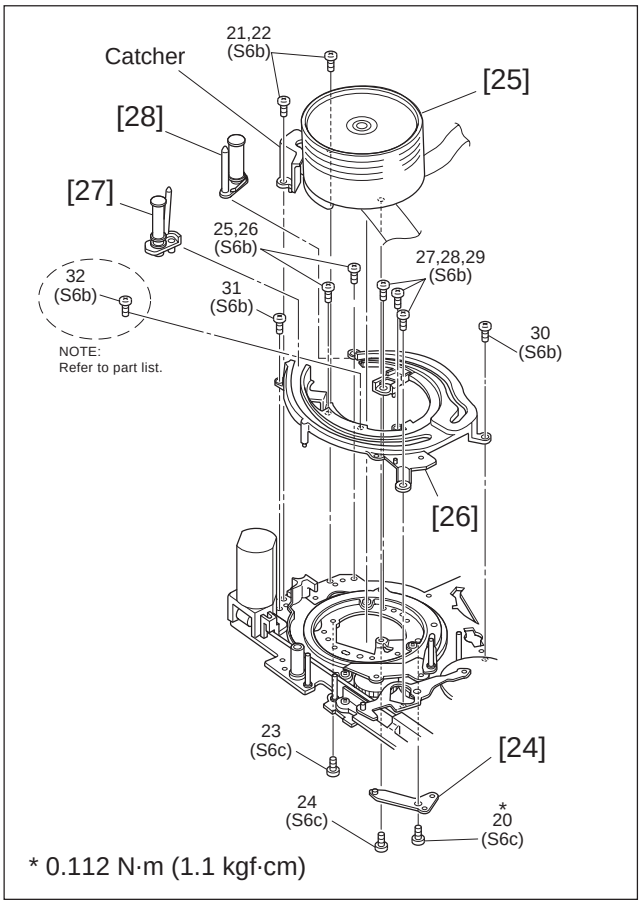


Fig.M6

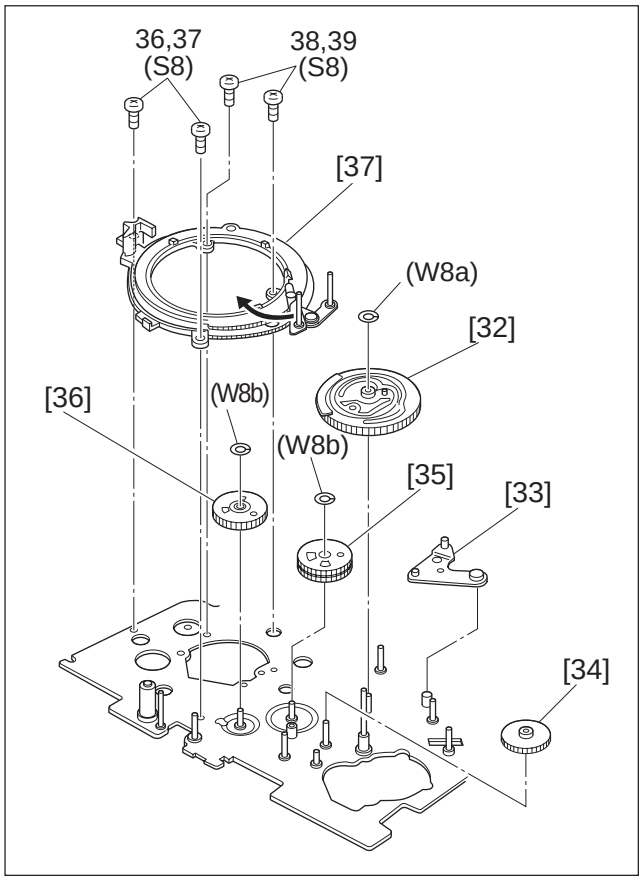


Fig.M8

2.2.4 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE

NOTE:

Pay careful attention to the installing order and phase of mechanism parts of the loading system.

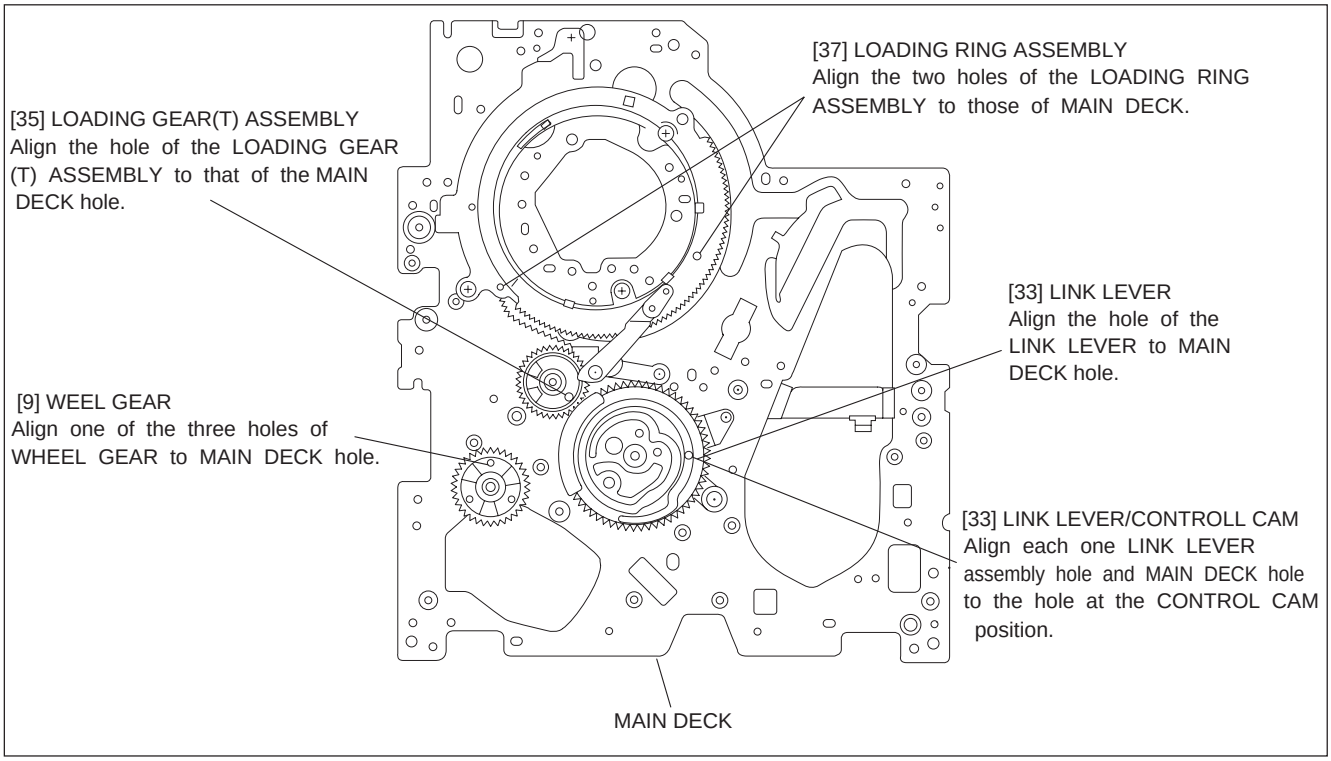

[37] LOADING RING ASSEMBLY
Align the two holes of the LOADING RING ASSEMBLY to those of MAIN DECK.
[35] LOADING GEAR(T) ASSEMBLY
Align the hole of the LOADING GEAR (T) ASSEMBLY to that of the MAIN DECK hole.
[33] LINK LEVER
Align the hole of the LINK LEVER to MAIN DECK hole.
[9] WEEL GEAR
Align one of the three holes of WHEEL GEAR to MAIN DECK hole.
[33] LINK LEVER/CONTROLL CAM
Align each one LINK LEVER assembly hole and MAIN DECK hole to the hole at the CONTROL CAM position.
MAIN DECK

Fig.2-2-5 Top of main deck

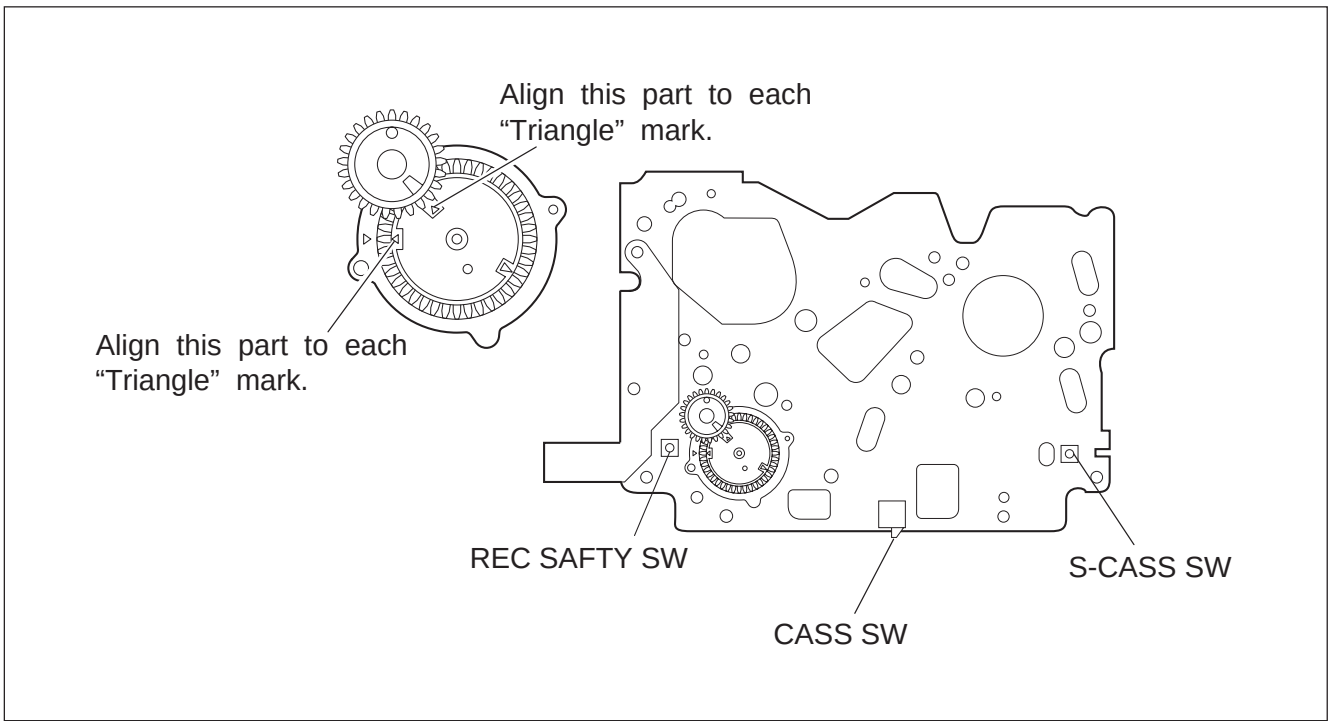


Fig.2-2-6 Rotary encoder

2.2.5 SERVISE NOTE

Use the following chart to manage screws.

Symbol No.	[1]	[7]	[10]				[12]		[13]	[19]	[20]		[21]	[22]			[23]		
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Place to stick screw																			
Reference drawing (Fig. No.)	M1	M2	M3							M4			M5						
Screw tightening torque	I										II						I		

Symbol No.	[24]	[25]			[26]							[31]			[37]		
Removing order of screw	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Place to stick screw																				
Reference drawing (Fig. No.)	M6													M7			M8			
Screw tightening torque	III	I																		

<NOTE>

・Pay careful attention to tightening torque for each screw.
Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.

I : 0.216N・m(2.2kgf・cm)　　II : 0.118N・m(1.2kgf・cm)　　III : 0.112N・m(1.1kgf・cm)

Fig.2-2-7

2.2.6 REMARKS

2.2.6.1 Cleaning

(1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

NOTE:
Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

(2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.

(3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

2.2.6.2 Applying oil and grease

(1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.

(2) For parts and points to apply oil and grease, refer to the exploded view of the 3.2 VHS-C MECHANISM ASSEMBLY. Fig.2-2-8 specifies oil and grease to be used.

(3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB

specifies oil and grease to be used

Fig.2-2-8

2.3 VHS MECHANISM

2.3.1 Notes

This model's mechanism relates closely to the rotary encoder and system control circuit (the rotary encoder is meshed with the control cam).
The system control circuit detects the mechanism condition using the rotary encoder's phase (internal switch phase). Therefore, the parts such as the rotary encoder, control plate, loading gear and control cam need to be installed correctly in order for the mechanism to operate properly. (For the mechanism phase adjustment, refer to the installation of each part.)

- Before using a soldering iron, be sure to disconnect the power plug from the AC outlet.
- Do not touch any of the adjustment points until a defect position is specified.
- When plugging or unplugging the connector, be sure not to damage the wire.
- Be sure the springs are hooked all the way around and in the correct direction.
- When performing repairs, take care not to damage a catch, etc.

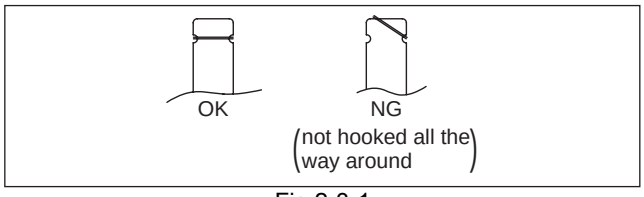


Fig.2-3-1

2.3.2 Mechanism operation check

When the mechanism is operated without a cassette loaded, operate the mechanism in the mechanism service mode.

2.3.3 Setting the mechanism assembling mode

The mechanism-assembling mode is provided with this mechanism. When disassembling and assembling, it is required to engage this mode.
Set the mode by adopting the following procedures.

(1) Remove the mechanism assembly using the disassembling procedure.
(2) Turn gear (a) of the loading motor manually to set the mechanism assembly to the eject end mode. Make sure that the main deck is connected to the guide hole (a) of the drive lever and the seal (a) of the main deck is connected to the mark "E" of the control plate. This condition is called the mechanism-assembling mode.

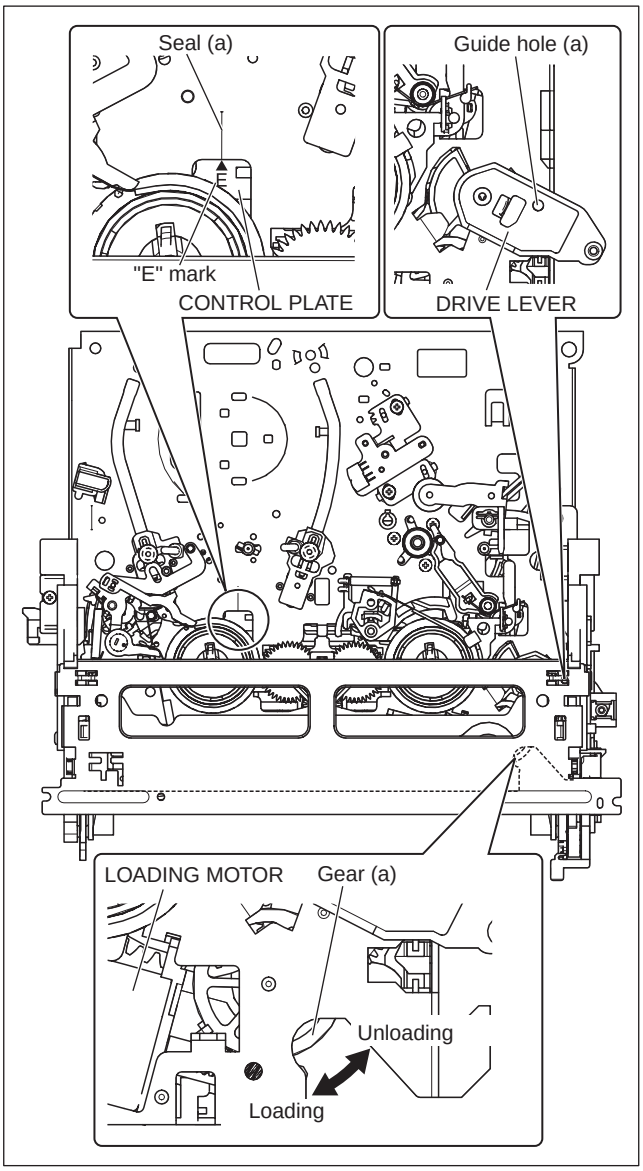


Fig.2-3-2

2.3.4 Layout of the main mechanism parts

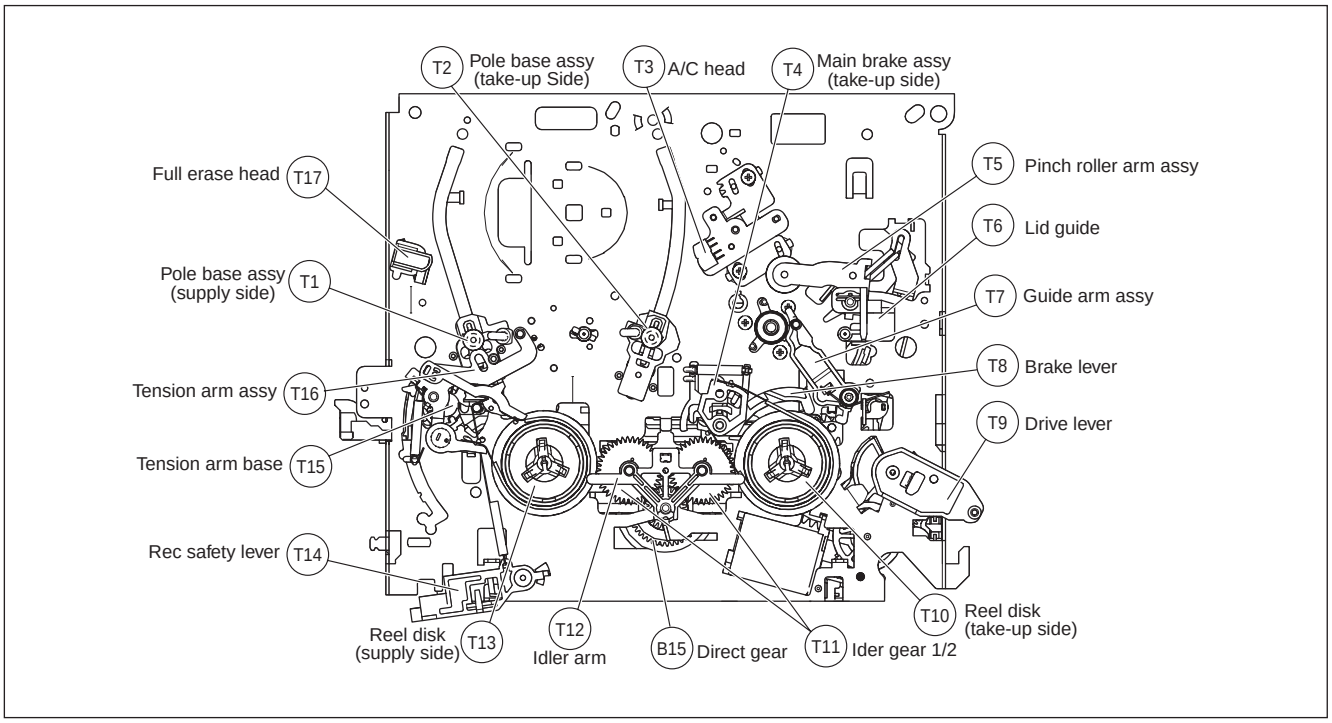

T2 Pole base assy (take-up Side)
T3 A/C head
T4 Main brake assy (take-up side)
Full erase head T17
T5 Pinch roller arm assy
T6 Lid guide
Pole base assy (supply side) T1
T7 Guide arm assy
T8 Brake lever
Tension arm assy T16
T9 Drive lever
Tension arm base T15
Rec safety lever T14
T10 Reel disk (take-up side)
Reel disk (supply side) T13
T12 Idler arm
B15 Direct gear
T11 Ider gear 1/2

Fig.2-3-3

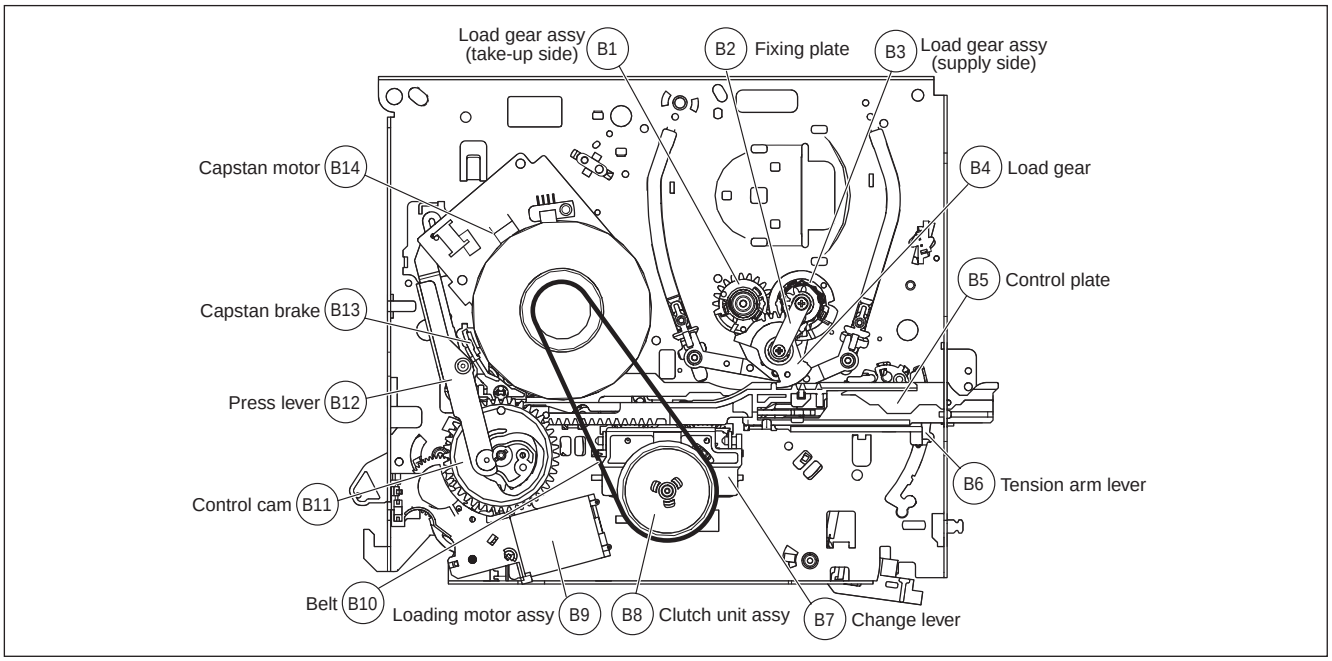


Fig.2-3-4

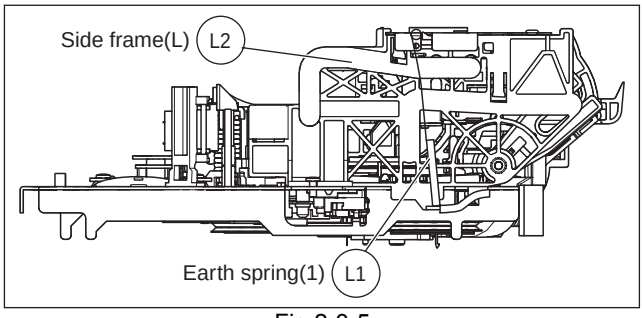


Fig.2-3-5

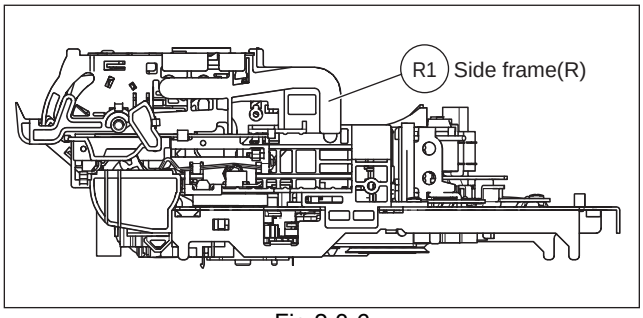


Fig.2-3-6

2.3.5 Disassembling procedure table

This table shows the order of parts removal when replacing each part. For replacement, remove the parts in the order of 1 to 13 shown in the table and install the parts in the reverse order.

The symbol number before each part name shows the number in the figure “Layout of the main mechanism parts”. T and B on the right of each part name show the side from which the part should be removed (T: From the front of the mechanism, B: From the rear of the mechanism, T/B: From both sides).

Symbols and numbers	Removal parts / (Reference items) Replacement parts	Front(T)/Back(B) of mechanism	Number of removal steps	Earth spring (1)	Top frame	Cassette holder	Side frame (L)	Drive arm	Side frame (R)	Lid guide	Idler arm	Idler gear 1/2	Main brake (T)	Reel disk (T)	Tension arm	Tension arm base	Press lever	Control cam	Capstan brake assy	Loading motor assy	Belt	Fixing plate	Load gear	Loading gear assy (S)	Loading gear assy (T)	Control plate	Clutch unit	Direct gear
L1	2.1 Earth spring (1)	T	1																									
-	2.1 Top frame	T	2	1																								
-	2.1 Cassette holder	T	3	1	2																							
L2	2.1 Side frame (L)	T	3	1	2																							
-	2.1 Drive arm	T	5	1	2	3	4																					
R1	2.1 Side frame (R)	T	3	1	2																							
T3	2.2 A/C head	T	1																									
T17	- FE head	T/B	1																									
T7	2.3 Guide arm assy	T	1																									
T6	2.3 Lid guide	T	1																									
T5	2.3 Pinch roller arm assy	T	2							1																		
T12	2.4 Idler arm	T	4	1	2	3																						
T11	2.4 Idler gear 1/2	T	5	1	2	3					4																	
T4	2.5 Main brake assy (T)	T	6	1	2	3					4	5																
T10	2.5 Reel disk (T)	T	7	1	2	3					4	5	6															
T16	2.5 Tension arm	T	6	1	2	3					4	5																
T13	2.5 Reel disk (S)	T	7	1	2	3					4	5			6													
T15	2.5 Tension arm base	T	7	1	2	3					4	5			6													
-	- T-up head	T	8	1	2	3					4	5			6	7												
-	- T-up lever	T	8	1	2	3					4	5			6	7												
T8	2.5 Brake lever	T	8	1	2	3					4	5	6	7														
T14	2.5 Rec safety lever	T	7	1	2	3	4	5	6																			
B12	2.6 Press lever	B	1																									
B11	2.6 Control cam	B	2														1											
B13	2.6 Capstan brake assy	B	3														1	2										
B9	2.6 Loading motor assy	B	4														1	2	3									
B10	2.7 Belt	B	1																									
B14	2.7 Capstan motor	T/B	2																		1							
-	- Wire holder	T/B	1																									
B2	2.7 Fixing plate	B	1																									
B4	2.7 Load gear	B	2																			1						
B3	2.7 Loading gear assy(S)	B	3																			1	2					
B1	2.7 Loading gear assy(T)	B	4																			1	2	3				
T1	- Pole base assy(S)	T/B	4																			1	2	3				
T2	- Pole base assy(T)	T/B	5																			1	2	3	4			
-	- Load gear base	B	5																			1	2	3	4			
B5	2.7 Control plate	B	6														1	2			3	4	5					
T9	- Drive lever	T/B	10	1	2	3	4	5	6								7	8		9								
B8	2.8 Clutch unit	B	2																		1							
B15	2.8 Direct gear	B	3																		1						2	
B7	- Change lever	T/B	6								1	2									3						4	5
B6	- Tension arm lever	T/B	14	1	2	3					4	5			6	7	8	9			10	11	12			13		

2.3.6 REPLACEMENT OF THE MAIN MECHANISM PARTS

2.3.6.1 Cassette holder

2.3.6.1.1 Removal

(1) Remove the screws (a) and (b).
(2) Hold up the top frame, cassette holder assembly, drive arm assembly and side frames (L/R) all together and remove them by releasing the hooks (a) and (b).

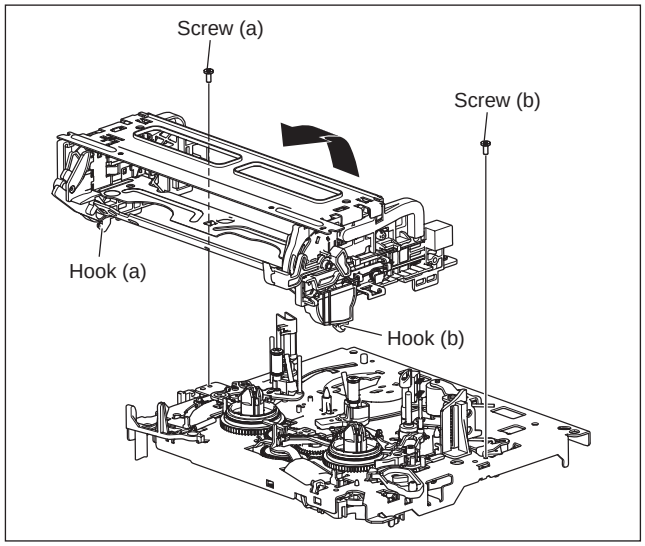


Fig.2-3-7

2.3.6.1.2 Installation (phase adjustment)

(1) Turn gear (a) of the loading motor assembly so that the main deck connects to the guide hole (a) of the drive lever.
(2) Hook the main deck to hooks (a) and (b).
(3) Place the projection of the drive lever to section (a) of the side frame (R) and install the cassette holder to the main deck. Make sure that the bosses of the side frame (L/R) connect with the holes (a) and (b) of the main deck.
(4) Secure screws (a) and (b).

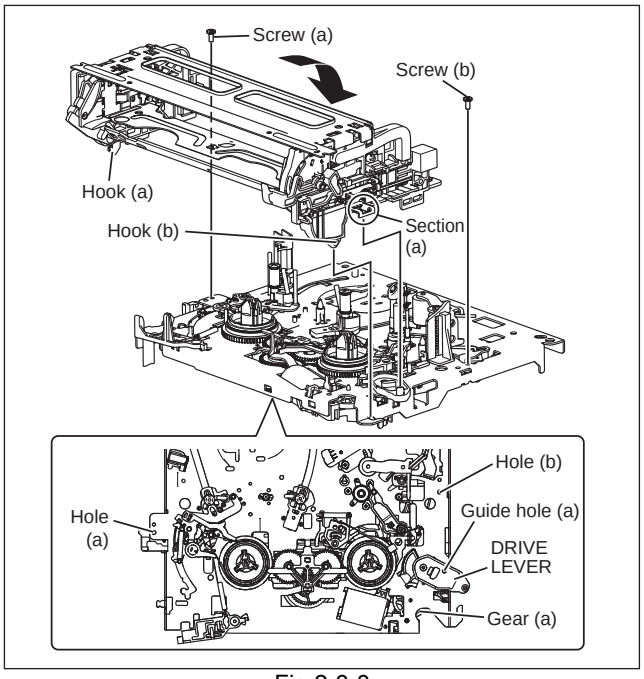


Fig.2-3-8

2.3.6.1.3 Disassembling

(1) Release hook (a) to remove the earth spring (1) from the top frame.
(2) Release the catches (a) and (b) and pull the top frame in the direction shown by the arrow (a) to remove it.
(3) Pull out the side frame (R).
(4) Pull out the cassette holder assembly and drive arm assembly from the side frame (L).

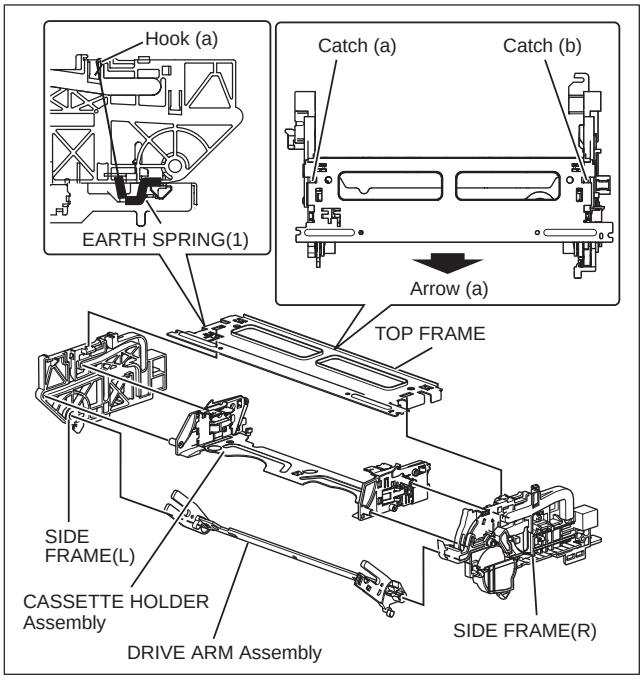


Fig.2-3-9

2.3.6.1.4 Assembling (installation and phase adjustment)

(1) Turn gear (a) of the loading motor assembly so that the main deck connects to the guide hole (a) of the drive lever.
(2) Place the projection of the drive lever on section (a) of the side frame (R) and install the side frame (R) to the main deck.
(3) Secure screw (b).
(4) Place section (b) of the drive arm on the gear of the side frame (R). Make sure that the pin of the door opener connects with section (c) of the drive arm.
(5) Place the drive arm on section (d) of the side frame (L) and install the side frame (L) on the main deck. Be sure to connect the earth spring (1) to the side frame (L).
(6) Secure screw (a).
(7) Turn gear (a) of the loading motor assembly until the drive arm is vertical.
(8) Place the slit of the side frame (L/R) at the foot of the cassette holder assembly and install the cassette holder.
(9) Place the top frame on the position guide (a) of the side frame (L/R) and push it in the direction shown by the arrow (a) for installation.
(10) Hook the earth spring (1) to the hook (a) of the top frame.

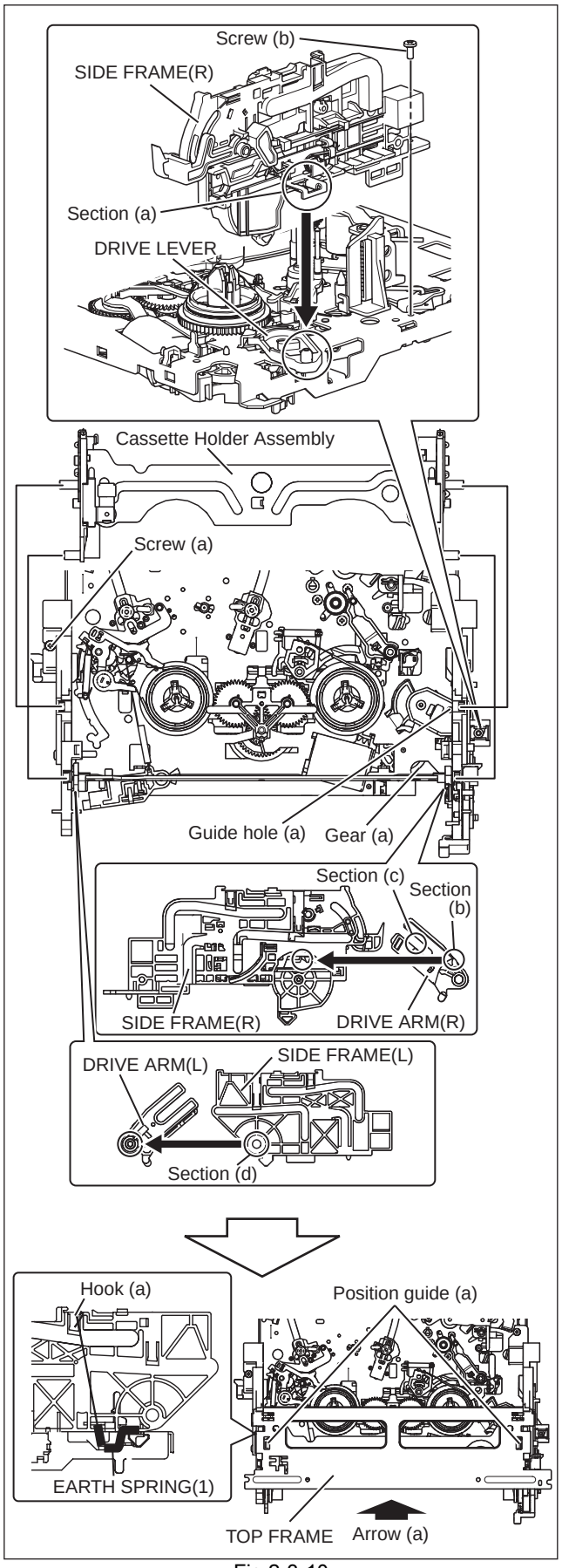


Fig.2-3-10

2.3.6.2 A/C head

2.3.6.2.1 Removal

(1) Remove screws (a) and (b).
(2) Remove the A/C head together with the head base.
(3) Remove the screws (c), (d) and (e) to remove the spring (a) and the A/C head from the Head base.

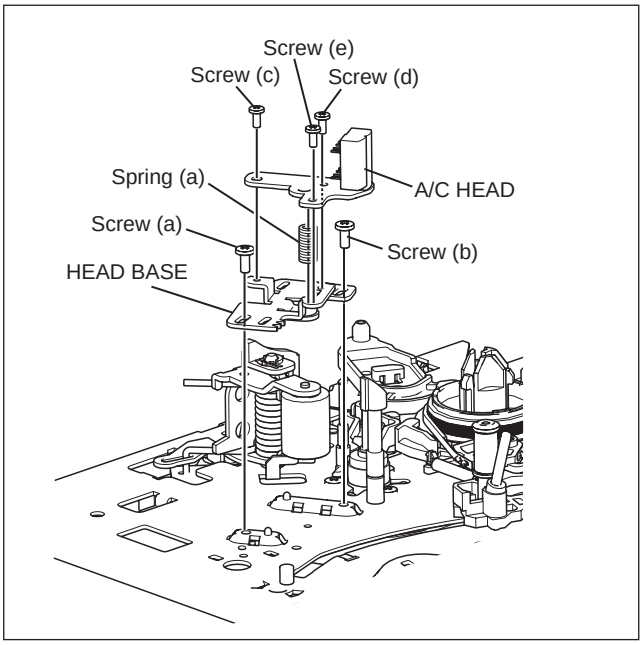


Fig.2-3-11

2.3.6.2.2 Installation (initial setting)

To install the A/C head to the head base, secure the screws in the order of (c), (d) and (e). To make the adjustment easy, temporarily elevate the A/C head.

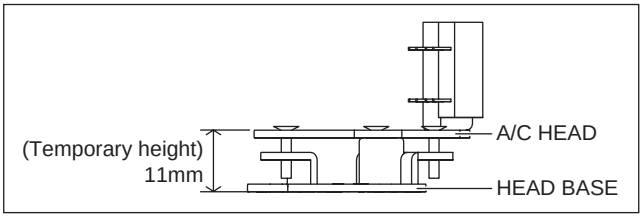


Fig.2-3-12

2.3.6.3 Guide arm, pinch roller arm

2.3.6.3.1 Removal

(1) Remove the spring (a) from the hook (a) and detach the guide arm assembly.
(2) Release the catch (a) to remove the lid guide.
(3) Remove the spring (b) from the hook (b) and detach the pinch roller arm assembly.

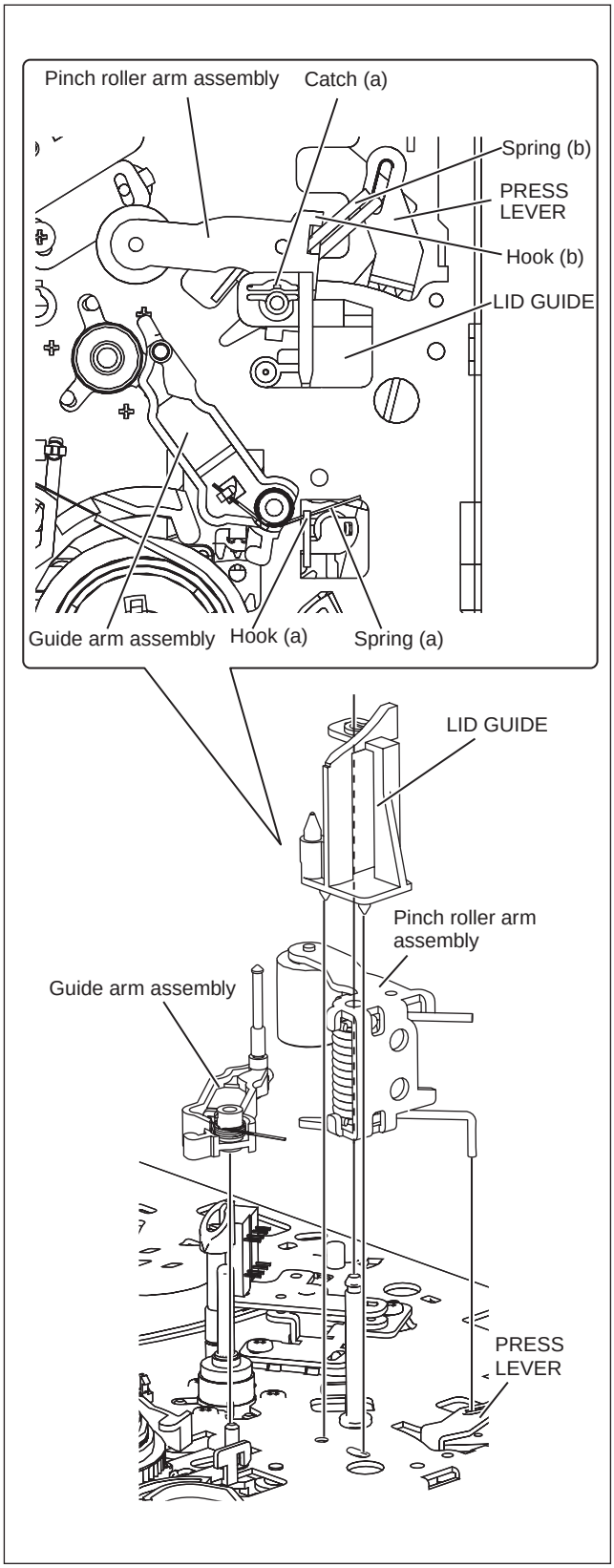


Fig.2-3-13

2.3.6.4 Idler arm, idler gear 1/2

2.3.6.4.1 Removal

(1) Release the catches (a) and (b) to detach the idler arm.
(2) Detach the idler gear 1/2.

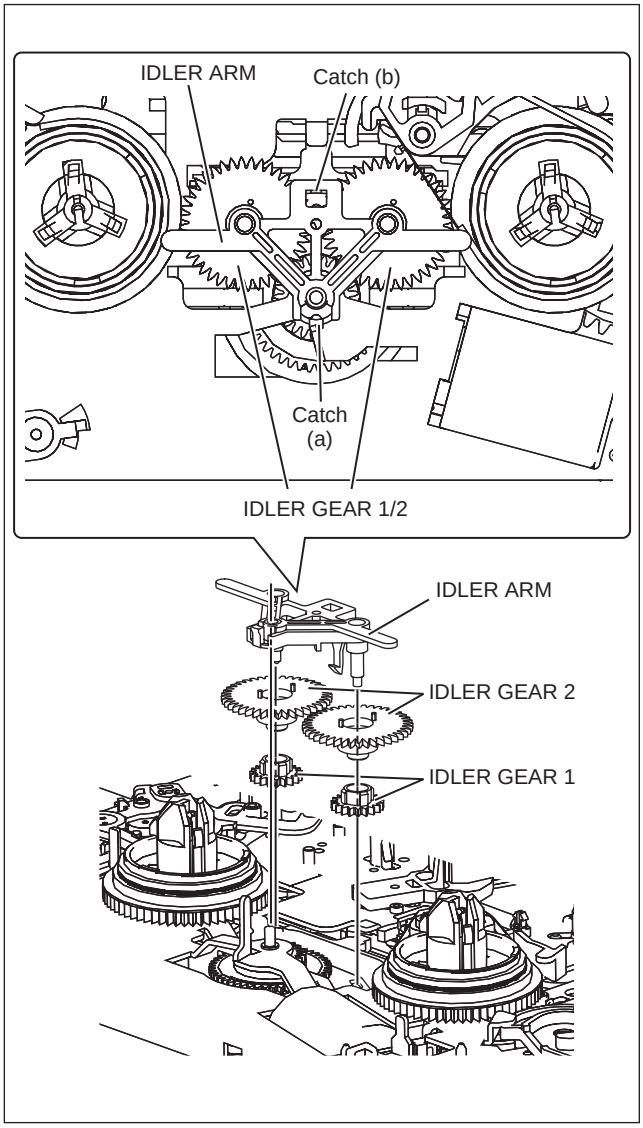


Fig.2-3-14

2.3.6.5 Main brake (T), brake lever, tension arm, reel disk (S/T), Rec safety lever

2.3.6.5.1 Removal

(1) Remove the spring (a). (Detach section (b) of the spring (a).)
(2) Release the catch (a) to detach the main brake (T).
(3) Release the catch (b) to detach the reel disk (T) and the spacer.
(4) Lift up and turn section (b) of the brake lever counterclockwise to remove the brake lever.
(5) Remove the spring (b) from the hook (a).
(6) Release the catch (c) to detach the tension arm.
(7) Release the catch (d) to detach the reel disk (S) and the spacer.
(8) Remove the spring (c) from the hook (b).
(9) Turn the tension arm base in the direction shown by arrow (a) to release catch (e). Place the projections of the tension arm base to the holes (a) to detach the tension arm base.
(10) While releasing the catch (f), turn the Rec safety lever counterclockwise to remove it.

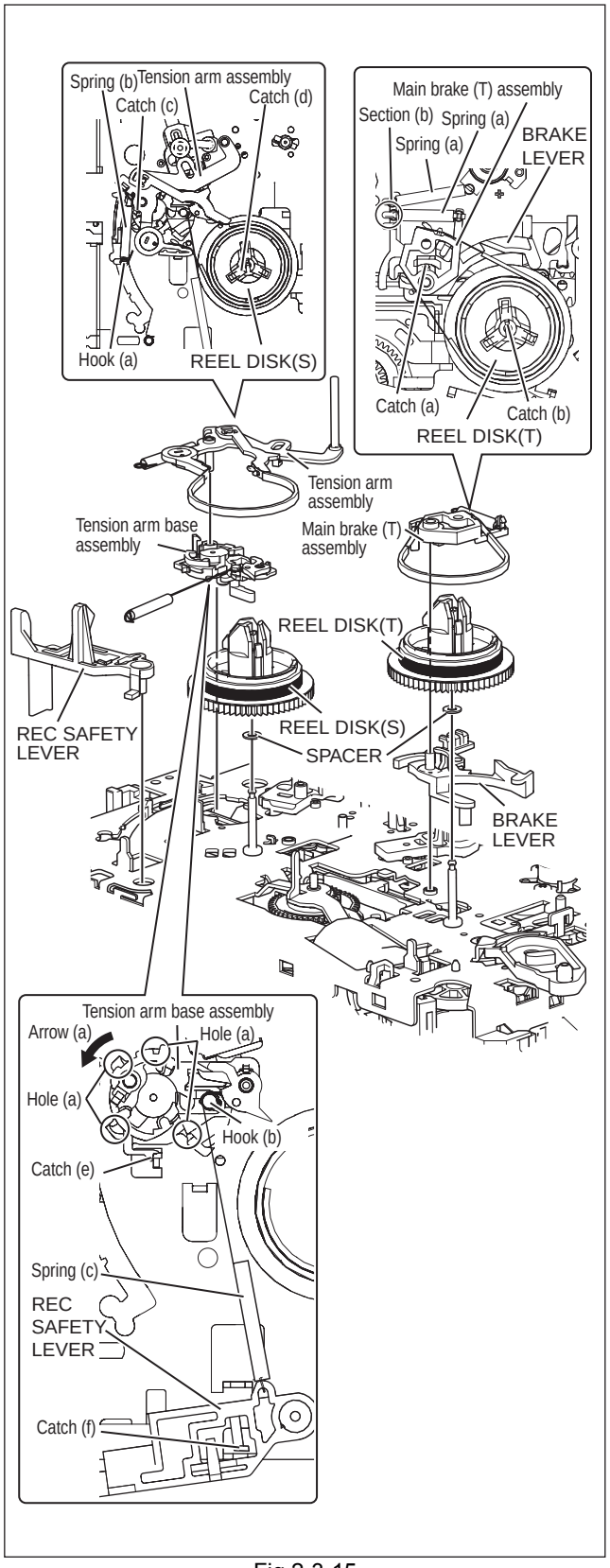


Fig.2-3-15

2.3.6.6 Press lever, control cam, capstan brake assembly, loading motor assembly

2.3.6.6.1 Removal

(1) Remove the slit washer (a) to detach the press lever.
(2) Release the slit washer (b) to detach the control cam.
(3) Release the catch (b) to detach the capstan brake assembly.
(4) Remove the solder (a).
(5) Remove the screw (a).
(6) Release the catches (c) and (d) to detach the loading motor assembly.

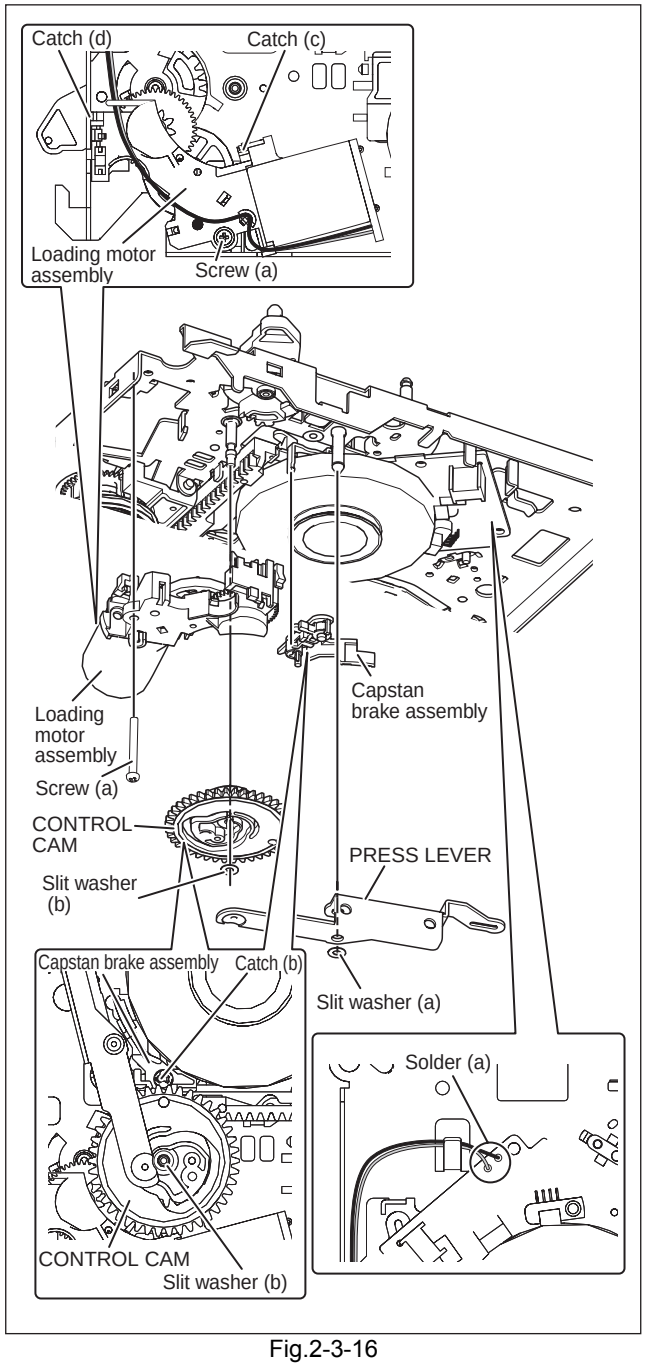


Fig.2-3-16

2.3.6.6.2 Installation (phase adjustment)

(1) Attach the loading motor assembly to the main deck.
(2) Secure the screw (a).
(3) Solder the wire to section (a).
(4) Arrange the wire along with the position guide (b).
(5) Attach the capstan brake assembly to the main deck.
(6) Place the main deck on the guide hole (a) of the control plate.
(7) Place the main deck on the guide hole (b) of the drive lever.
(8) Place the main deck no guide hole (c) of the control cam to install the control cam.
(9) Move the capstan brake in the direction shown by the arrow (a) to attach the press lever to the shaft (a). Make sure that the boss of the press lever fits in the control cam, and that the shaft (b) of the pinch roller arm assembly connects with the hole of the press lever.
(10) Attach slit washer (a) to shaft (a).

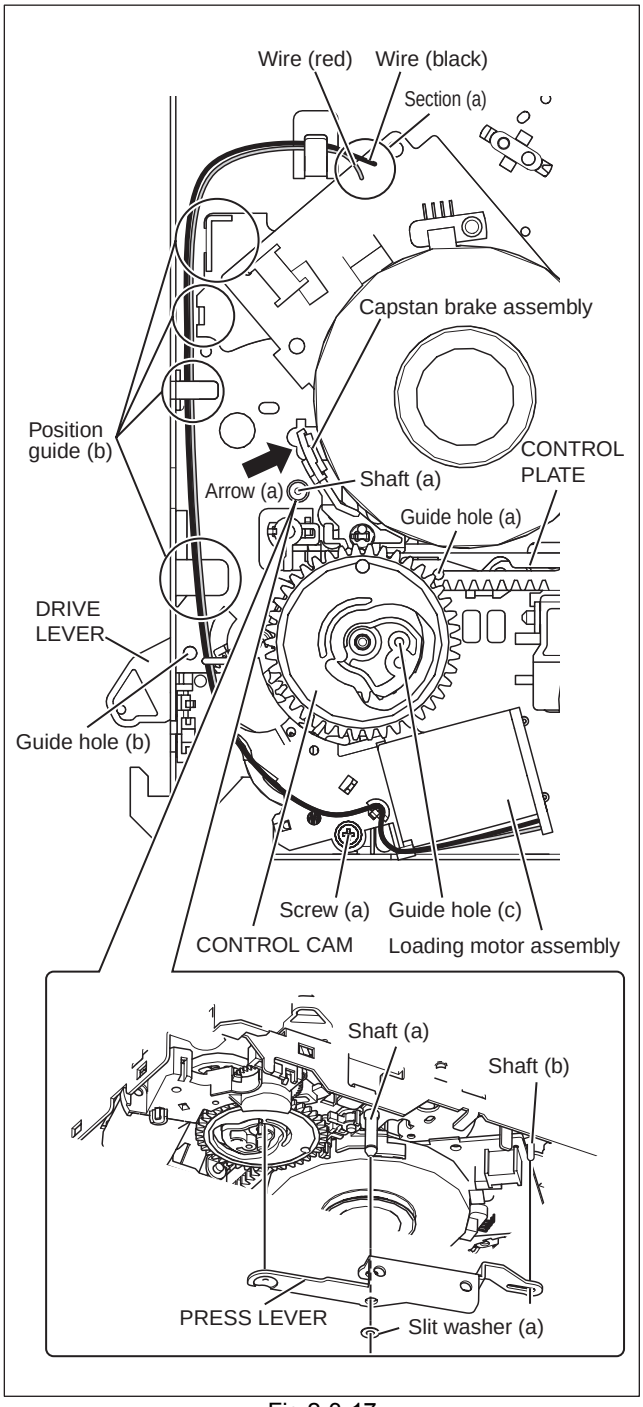


Fig.2-3-17

Note:

- When replacing the worm bearing of the loading motor assembly, attach it according to the following specification.
  If worm bearing is not attached correctly, a mechanism noise may occur. (See Fig. 2-3-18)

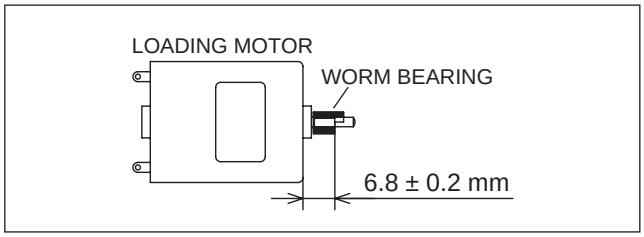


Fig.2-3-18

2.3.6.7 Capstan motor, load gear, control plate

2.3.6.7.1 Removal

(1) Detach the belt.
(2) Check that the FFC connector on the drum is disconnected.
(3) Release the catch (a) to remove the FFC wire.
(4) Remove the screws (a) to detach the capstan motor.
(5) Remove the screws (b) to detach the fixing plate.
(6) Release the catch (b) to detach the load gear.
(7) Turn the load gear (S/T) in the loading direction to detach it.
(8) Remove the control plate.

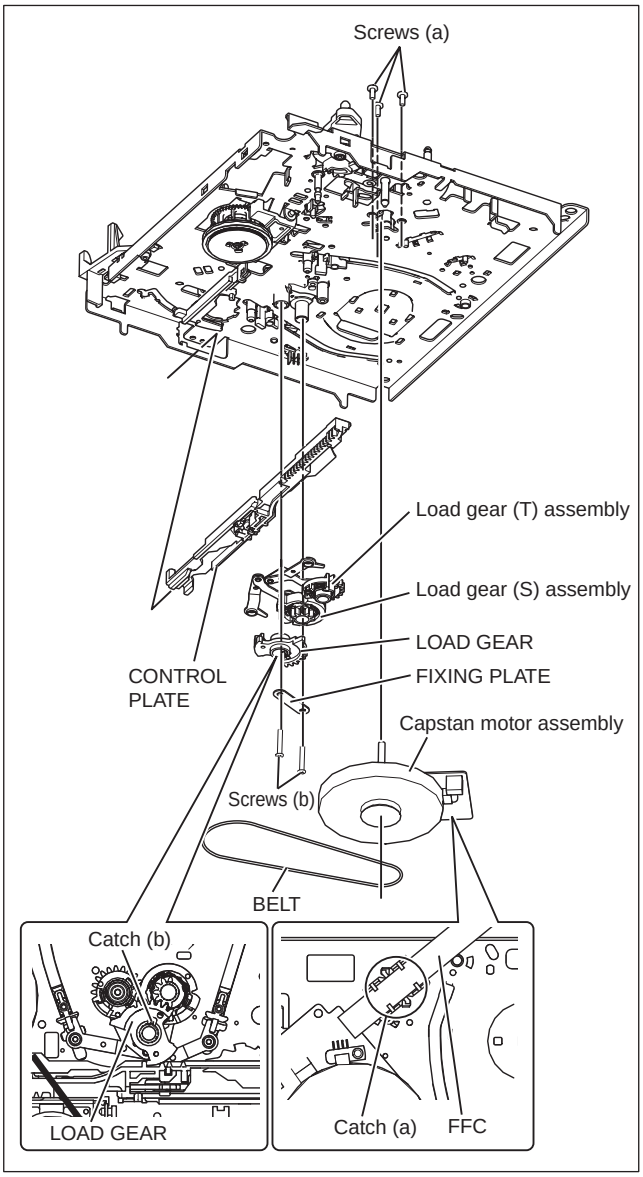


Fig.2-3-19

2.3.6.7.2 Installation (phase adjustment)

(1) Place the main deck on the guide hole (a) of the tension arm lever.
(2) Place the main deck on the guide hole (b) of the brake lever.
(3) Attach the control plate to align with the position guide (a).
(4) Place the hole (c) of the load arm (T) on the pole base (T) and the load gear (T) on the load gear base.
(5) Place the hole (d) of the load arm (S) on the pole base (S) and the load gear (S) on the load gear base. Be sure to align the guide mark (e) of the load gear (T) to that of the load gear (S).
(6) Turn the load gear (S/T) in the unloading direction to place the main deck on the guide hole (f) of the load gear (T).
(7) Place the main deck on the guide hole (g) of the control plate.
(8) Attach the load gear on the load gear base so that the control plate is placed on the edge (h) of the load gear.
(9) Place the fixing plate on the shaft of the load gear base and secure the screws (b).

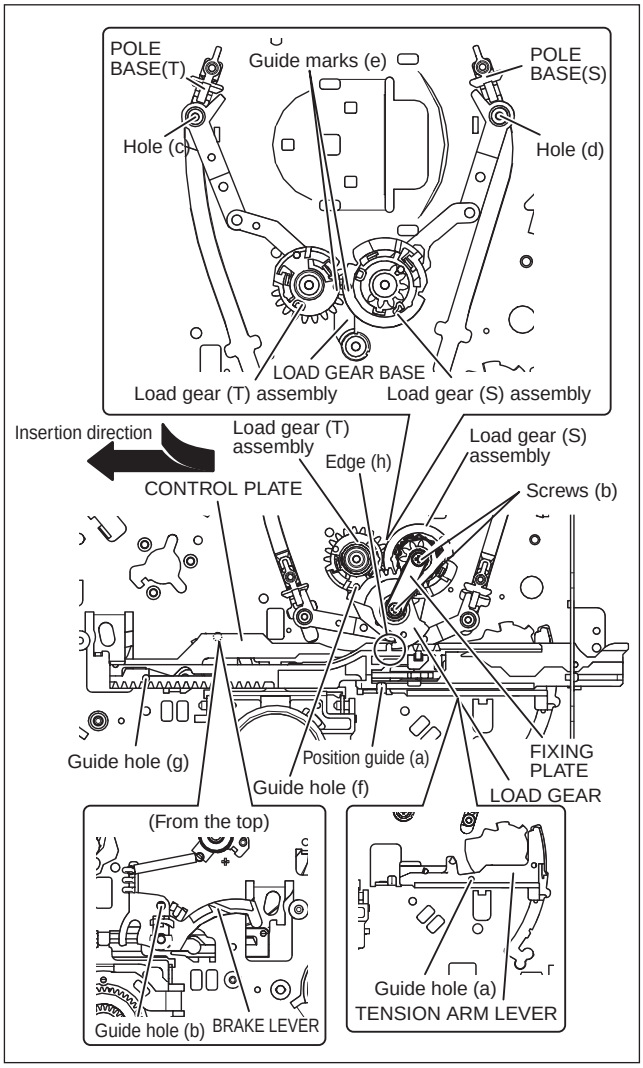


Fig.2-3-20

2.3.6.8 Clutch unit assembly, direct gear

2.3.6.8.1 Removal

(1) Remove the slit washer (a) to detach the clutch unit assembly.
(2) Remove the spring (a) and the direct gear.

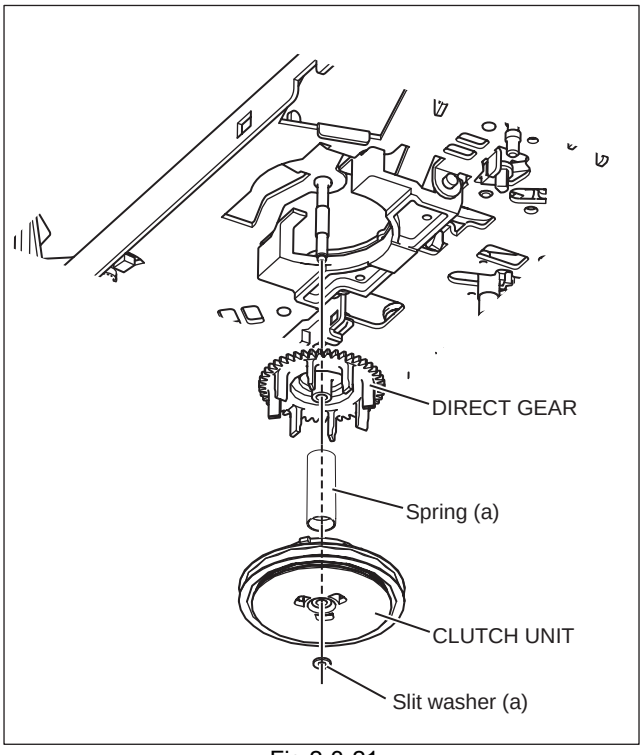
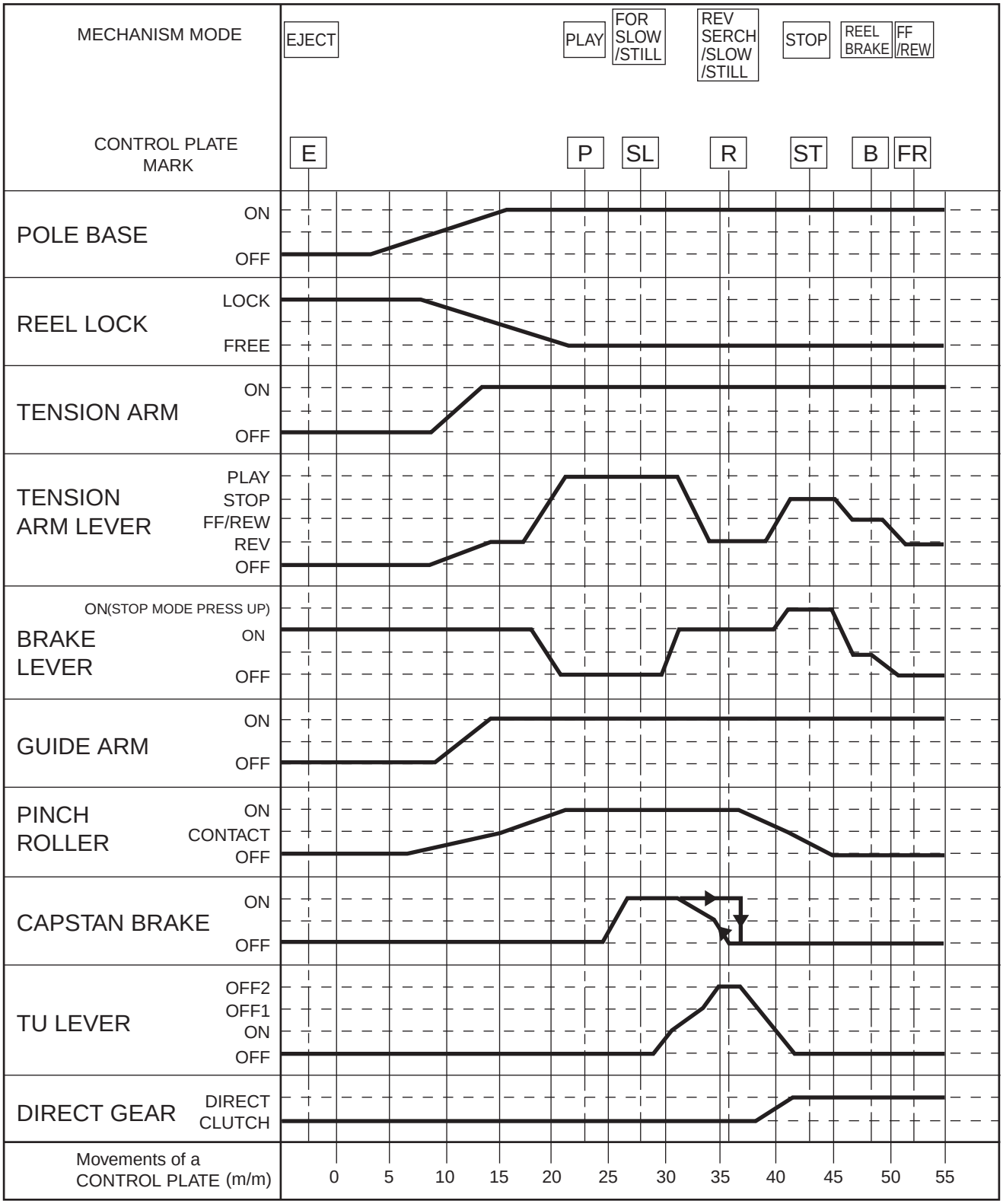


Fig.2-3-21

2.3.7 MECHANISM TIMING CHART



2.3.8 REMARKS

2.3.8.1 Cleaning

(1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

NOTE:
Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

(2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.

(3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

2.3.8.2 Applying oil and grease

(1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.

(2) For parts and points to apply oil and grease, refer to the exploded view of the 3.3 VHS MECHANISM ASSEMBLY. Fig.2-3-22 specifies oil and grease to be used.

(3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	COSMO-HV56	BB

specifies oil and grease to be used

Fig.2-3-22

JVC

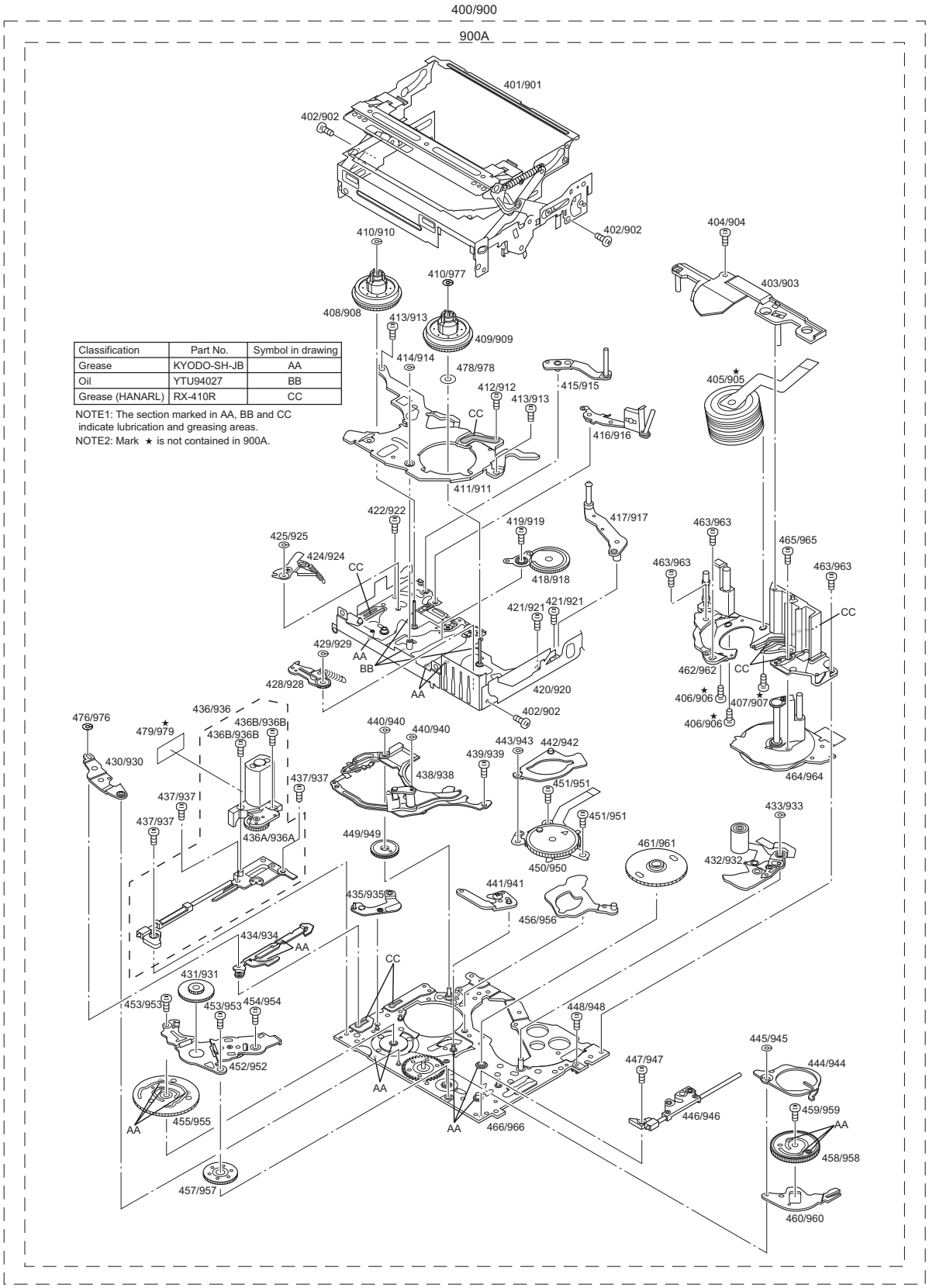
VICTOR COMPANY OF JAPAN, LIMITED
AV & MULTIMEDIA COMPANY CAMCORDER CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.86700)

Printed in Japan
200304WPC

SECTION 3
PARTS LIST

3.1 DVC MECHANISM ASSEMBLY



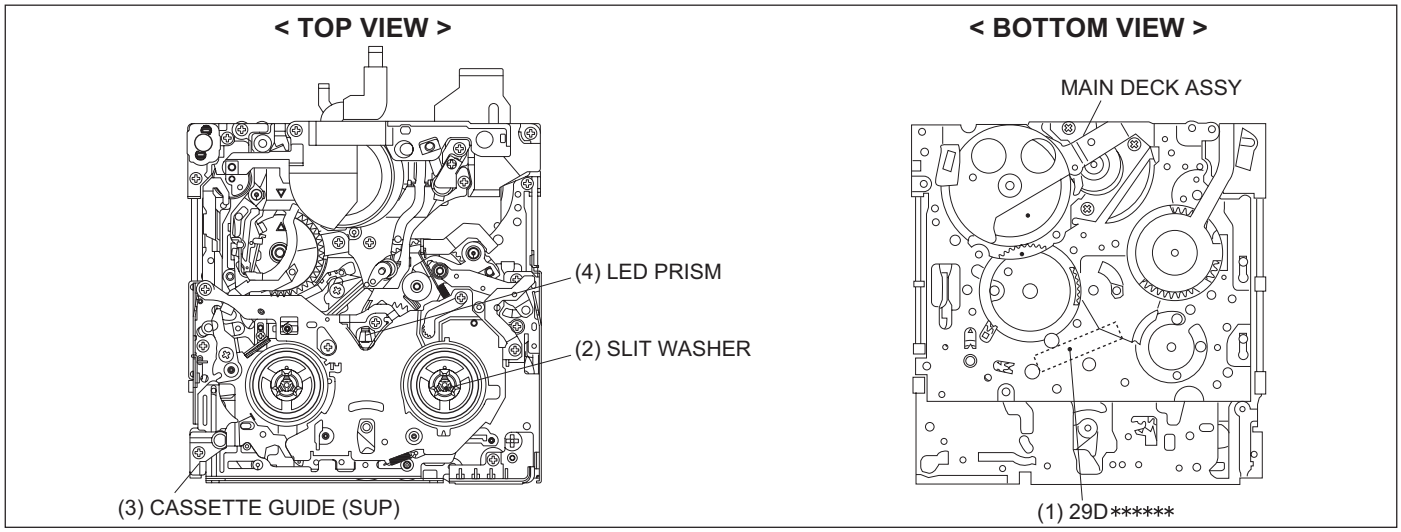
Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB
Grease (HANARL)	RX-410R	CC

NOTE1: The section marked in AA, BB and CC indicate lubrication and greasing areas.
NOTE2: Mark ★ is not contained in 900A.

Fig.3-1-1

3.1.1 DVC MECHANISM ASSEMBLY PART LIST

- Since parts numbers described here are the numbers at the time of manualissue, they are subject to change without notice. Therefore, be sure to see a parts list in the service manual of each model as for parts numbers.
- To distinguish the mechanism assembly with the symbol number of 400-499 from the mechanism assembly with the symbol number of 900-999, see the following procedures.
  (1) See the numbers on the backside of the MAIN DECK ASSY.
  For example, "29D******" is printed on the backside of the mechanism assembly with the symbol number of 900-999 (YMA0029D in this example). See the first three characters and numbers from the left.
  (2) See the color of the SLIT WASHER on the REEL DISK (TU).
  A red slit washer is used (the same color as a slit washer of CASSETTE GUIDE (SUP)) in the mechanism assembly with the symbol number of 400-499. A black slit washer is used in the mechanism assembly with the symbol number of 900-999.
  However, the black slit washer may be changed into a red one for the purpose of parts unification.
  (3) See the color of the CASSETTE GUIDE(SUP).
  Light-brown CASSETTE GUIDE(SUP) is used in the mechanism assembly with the symbol number of 400-499.
  Black CASSETTE GUIDE(SUP) is used in the mechanism assembly with the symbol number of 900-999.
  (4) See the shape of the LED PRISM. LED PRISM consists of only resin in the mechanism assembly with the symbol number of 400-499.
  Upper part of the LED PRISM is covered with black metal in the mechanism assembly with the symbol number of 900-999.



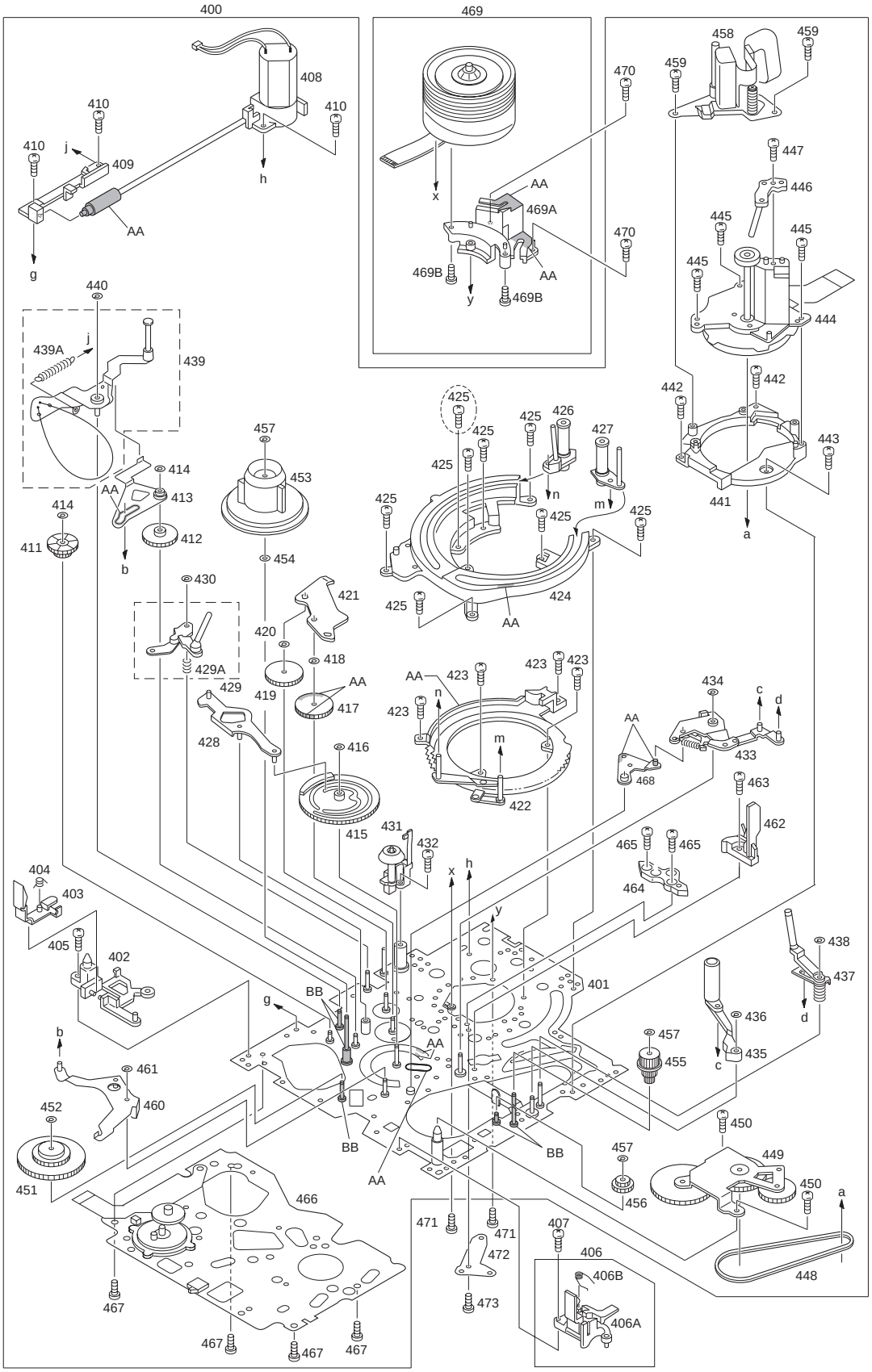
Part Name	Symbol No.	Part No.	Part No.	Part No.	Symbol No.	Part No.	Patr No.
MECHA(A) ASSY	400	YMA0029C	YMA0029M	YMA0029L	900	YMA0029H	YMA0029E
MECHA(A)ASSY	-	-	-	-	900A	YMA0029D	-
CASSETTE HOUSING ASSY	401	LY31543-002E*	LY31543-002H	←	901	LY32870-001G*	LY32870-001J
MINI SCREW,X3	402	YQ43893-8	←	←	902	←	←
UPPER BASE ASSY	403	LY31542-001J	←	←	903	LYH30420-001A	←
MINI SCREW	404	YQ43893*	QYSPSPU1425M	←	904	←	←
DRUM ASSY	405	**	**	**	905	**	**
DAMP.SCREW ASSY,X2	406	LY42820-001A	←	←	906	←	←
DAMP.SCREW ASSY	407	LY42820-002A	←	←	907	←	←
REEL DISK ASSY (SUP)	408	LY31538-001B*	LY31538-001F	←	908	←	←
REEL DISK ASSY (TU)	409	LY31538-002B*	LY31538-002H	LY31538-002G	909	LY31538-002H	←
SLIT WASHER,X2 or X1	410	YQ44246,(x2)	←,(x2)	←,(x2)	910	←*,(x1)	←,(x2)
REEL COVER ASSY	411	LY10217-001A*	LY10217-001F	←	911	LY10372-001D	←
MINI SCREW	412	LY42120-001A*	LY42120-002A	←	912	←	←
MINI SCREW,X2	413	LY41945-003A	←	←	913	←	←
SLIT WASHER	414	YQ44246	←	←	914	←	←
TENSION ARM ASSY	415	LY42025-001C	←	←	915	LY43725-001D	←
SLANT POLE ARM ASSY	416	LY31535-001F	←	←	916	LYH40269-001A	←
TU ARM ASSY	417	LY42031-001G*	LY42031-001K	←	917	LY43731-001F	←
SWING ARM ASSY	418	LY31531-001D	←	←	918	←	←
MINI SCREW	419	YQ43893	←	←	919	←	←
SLIDE DECK FINAL ASSY	420	LY20530-003B*	LY20530-003E	←	920	LYH30424-001A	←

Part Name	Symbol No.	Part No.	Part No.	Part No.	Symbol No.	Part No.	Patr No.
MINI SCREW,X2	421	YQ43893	←	←	921	←	←
MINI SCREW	422	LY43023-001A	←	←	922	←	←
PAD ARM ASSY	424	LY31533-001E	←	←	924	LYH30419-001A	←
SLIT WASHER	425	YQ44246	←	←	925	←	←
TU BRAKE ASSY	428	LY42016-001B	←	←	928	LYH40270-001A	←
SLIT WASHER	429	YQ44246	←	←	929	←	←
TENSION CONTROL LEVER ASSY	430	LY41959-001B	←	←	930	LY43684-001A	←
CENTER GEAR	431	LY31525-001B	←	←	931	LY32861-001A	←
PINCH ROLLER ARM FINAL ASSY	432	LY31516-001E	←	LY31516-001F	932	←	←
SLIT WASHER	433	YQ44246	←	←	933	←	←
TENSION CONTROL PLATE ASSY	434	LY41956-001C	←	←	934	LY43681-001A	←
BRAKE CONTROL LEVER ASSY	435	LY41962-001B*	LY41962-001C	←	935	LY43687-001A	←
MOTOR BRACKET ASSY	436	LY20525-002C	←	←	936	LYH30421-001A	←
LOADING MOTOR	436A	QAR0138-001	←	←	936A	←	←
TAPPING SCREW,x2	436B	LY41940-001A	←	←	936B	←	←
MINI SCREW,x3	437	YQ43893	←	←	937	←	←
GUIDE RAIL ASSY	438	LY20528-001R*	LY20528-001U	←	938	LYH30422-001A	←
MINI SCREW	439	YQ43893	←	←	939	←	←
SLIT WASHER,X2	440	YQ44246	←	←	940	←	←
SLIDE LEVER2 ASSY	441	LY31498-001C	←	LY31498-001D	941	LY32843-001A	←
LOADING PLATE ASSY	442	LY41965-001A	←	←	942	LY43690-001A	←
SLIT WASHER	443	YQ44246	←	←	943	←	←
EJECT LEVER	444	LY31522-001B	←	←	944	LY32858-001A	←
SLIT WASHER	445	YQ44246	←	←	945	←	←
BASE R ASSY	446	LY41929-001E*	LY41929-001F	←	946	LYH40271-001A	←
MINI SCREW	447	YQ43893	←	←	947	←	←
MINI SCREW	448	LY41945-001B	←	←	948	←	←
MODE GEAR	449	LY41930-001A	←	←	949	LY43665-001A	←
ROTARY ENCODER	450	QSW0876-003	←	←	950	←	←
MINI SCREW,X2	451	YQ43893	←	←	951	←	←
GEAR COVER ASSY	452	LY31524-001A	←	←	952	LY32860-001A	←
MINI SCREW,X2	453	YQ43893	←	←	953	←	←
MINI SCREW	454	YQ43893-4	←	←	954	←	←
MAIN CAM ASSY	455	LY41948-001C	←	←	955	LY43676-001A	←
SLIDE ARM ASSY	456	LY41941-001B	←	←	956	←	←
CONNECT GEAR 2	457	LY41951-001B	←	←	957	LY43678-001A	←
SUB CAM ASSY	458	LY41954-001B	←	LY41954-001E	958	←	←
MINI SCREW	459	LY42120-001A	←	←	959	←	←
CONTROL ARM ASSY	460	LY41952-001A	←	←	960	LY43692-001A	←
REEL GEAR 1	461	LY31523-001B	←	←	961	LY32859-001A	←
DRUM BASE ASSY	462	LY31508-002A*	LY31508-002B	LY33372-001A	962	LY31508-002B	←
SCREW,X3	463	QYSPSPU1425M	←	←	963	←	←
CAPSTAN MOTOR	464	QAR0142-001	←	←	964	←	←
MINI SCREW	465	YQ43893	←	←	965	←	←
MAIN DECK ASSY	466	LY10210-001D*	LY10210-001G	←	966	LY10367-001D*	LY10367-001E
SLIT WASHER	476	YQ44246	←	←	976	←	←
SLIT WASHER	477	-	-	-	977	YQ44246-6	-
WASHER	478	-	-	-	978	LY42047-005A	←
SPACER	479	-*	LY43987-001B	←	979	←	←

NOTE:

MARK ← is same as left.
MARK - is not used.
MARK * reference model was also changed.
MARK ** shows different parts number, depending on models.

3.2 VHS-C MECHANISM ASSEMBLY



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB

NOTE: The section marked in **AA** and **BB** indicate lubrication and greasing areas.

Fig.3-2-1

3.2.1 VHS-C MECHANISM ASSEMBLY PARTS LIST

- Since parts numbers described here are the numbers at the time of manualissue, they are subject to change without notice. Therefore, be sure to see a parts list in the service manual of each model as for parts numbers.

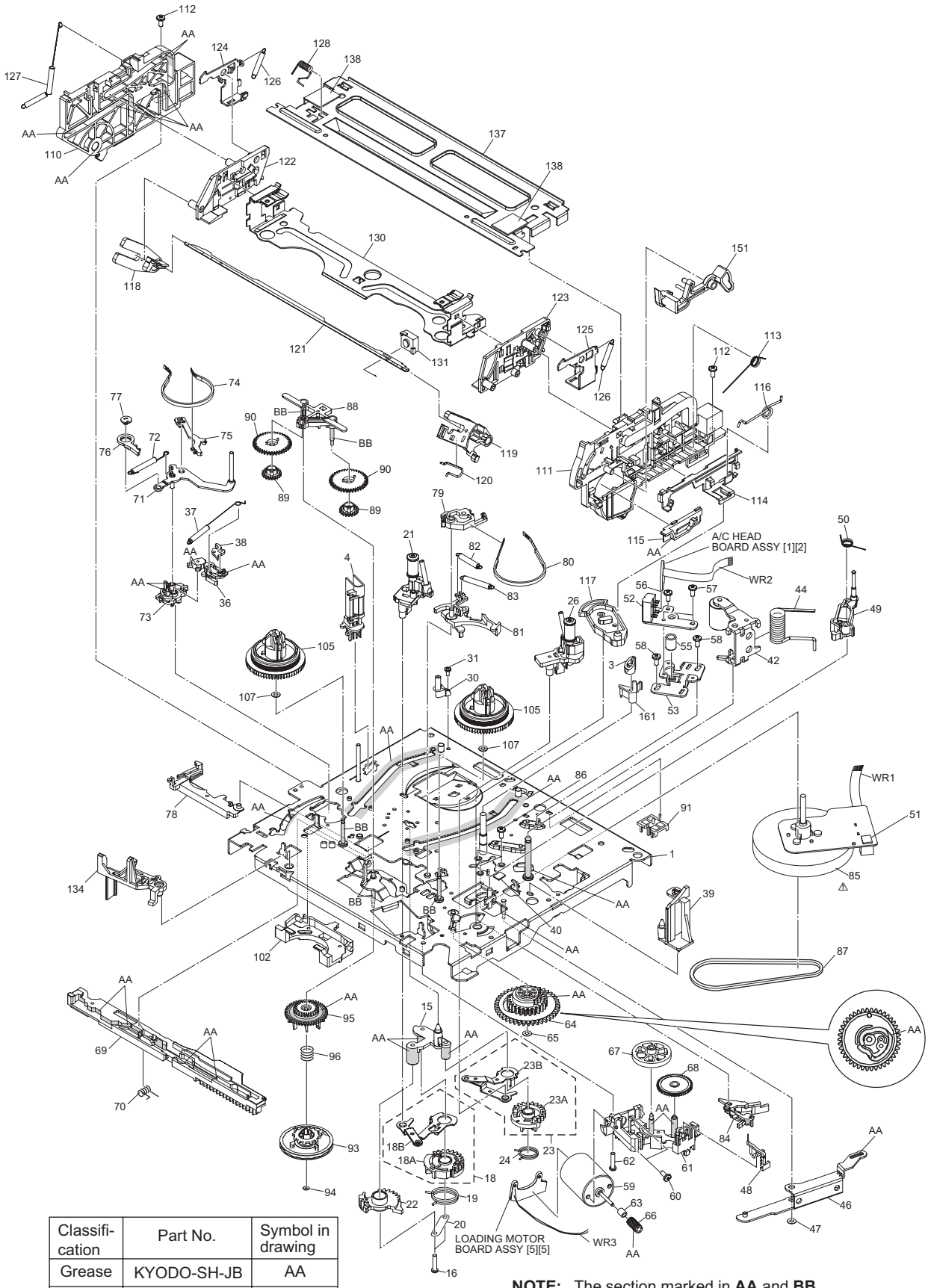
Part Name	Symbol No.	Part No.	Part No.	Part No.	Part No.	Part No.
MECHA(B) ASSY	400	YMA0033A-E	YMA0042A-E	YMA0034A-E	YMA0036A-E	YMA0040A-E
MAIN DECK ASSY	401	LY20612-001B	←	←	←	←
CASSETTE GUIDE (LEFT)	402	LY31817-001A	←	←	←	←
SW LEVER (LEFT)	403	LY31815-001A	←	←	←	←
TORSION SPRING	404	LY42581-001A	←	←	←	←
SCREW	405	LY42722-001A	←	←	←	←
CASSETTE GUIDE ASSY(RIGHT)	406	-	-	YQ44339A-7	←	←
SW.LEVER(RIGHT)	406A	-	-	YQ32162-1-3	←	←
TORSION SPRING	406B	-	-	YQ44340-1-4	←	←
SCREW	407	-	-	LY42819-001A	←	←
MOTOR BRACKET ASSY	408	LY31826-001A	←	←	←	←
WORM BRACKET	409	YQ20793	LY20951-001A	YQ20793	←	LY20951-001A
SCREW,X3	410	LY42722-001A	←	←	←	←
WHEEL GEAR	411	LY31925-001A	←	←	←	←
MIDDLE GEAR	412	LY42730-001A	←	←	←	←
CANCEL LEVER ASSY	413	LY42521-001A	←	←	←	←
SLIT WASHER,X2	414	LY42754-003A	←	←	←	←
CONTROL CAM	415	YQ20827-2-1	←	←	←	←
SLIT WASHER	416	PQM30017-25	←	←	←	←
LOADING GEAR(T)ASSY	417	LY42733-001A	←	←	←	←
SLIT WASHER	418	LY42754-003A	←	←	←	←
LOADING GEAR(S)ASSY	419	LY42732-001A	←	←	←	←
SLIT WASHER	420	LY42754-003A	←	←	←	←
COVER PLATE	421	LY42403-001A	←	←	←	←
LOADING RING ASSY	422	LY42452-001A	←	←	←	←
SCREW,X4	423	LY42728-001A	←	←	←	←
GUIDE RAIL	424	LY10239-001A	←	←	←	←
SCREW,X8 or X7	425	LY42728-001A,(X8)	←,(X7)	←,(X8)	←,(X8)	←,(X7)
POLE BASE(S)ASSY	426	LY30161-001B	←	←	←	←
POLE BASE(T)ASSY	427	LY30162-002A	←	←	←	←
DRIVE LEVER ASSY	428	LY42523-001A	←	←	←	←
SLANT ARM ASSY	429	LY42545-001B	LY44000-001B	LY42545-001B	←	LY44000-001B
TORSION SPRING(S)	429A	LY42547-001A	LY43992-001A	LY42547-001A	←	LY43992-001A
SLIT WASHER	430	LY42754-003A	←	←	←	←
ROLLER BASE ASSY	431	LY42739-003A	←	←	←	←
SCREW	432	LY42722-001A	←	←	←	←
LINK ARM ASSY	433	LY42494-001A	←	←	←	←
SLIT WASHER	434	PQM30017-25	←	←	←	←
PINCH ROLLER ARM ASSY	435	LY40018-002A	←	←	LY40018-005A	←
SLIT WASHER	436	PQM30017-25	←	←	←	←
TAKE UP GUIDE ARM ASSY	437	LY42541-001B	←	←	←	←
SLIT WASHER	438	LY42754-003A	←	←	←	←
TENSION ARM ASSY	439	LY42571-001A	←	←	←	←
TENSION SPRING	439A	LY42669-001A	←	←	←	←
SLIT WASHER	440	LY42754-003A	←	←	←	←
MOTOR BASE	441	YQ20797-1-5	←	←	←	←
SCREW,X2	442	LY42722-001A	←	←	←	←
SCREW	443	YQ44460	←	←	←	←
CAPSTAN MOTOR	444	QAR0212-001	QAR0212-002	QAR0212-001	QAR0212-002	←
TAPPING SCREW,X3	445	YQ44304	←	←	←	←
SLANT POLE BASE ASSY	446	LY42731-001A	←	←	←	←
TAPPING SCREW	447	YQ44304	←	←	←	←
TIMING BELT	448	YQ43710-2	←	←	←	←
CENTER PULLEY UNIT	449	LY42678-001A	←	←	←	LY42678-003A

Part Name	Symbol No.	Part No.	Part No.	Part No.	Part No.	Part No.
SCREW,X2	450	LY42722-002A	←	←	←	←
SUPPLY CLUTCH ASSY	451	LY42670-001A	←	←	←	←
SLIT WASHER	452	LY42754-003A	←	←	←	←
REEL DISC	453	YQ31861-1-7	←	←	←	←
WASHER	454	LY42755-001A	←	←	←	←
TAKE UP GEAR	455	LY31924-001A	←	←	←	←
BRAKE SUB GEAR	456	LY42738-001A	←	←	←	←
SLIT WASHER,X3	457	LY42754-003A	←	←	←	←
A/C HEAD UNIT	458	LY42544-001B	LY42544-002A	LY42544-001B	←	LY42544-002A
SCREW,X2	459	SPSN1750Z	←	←	←	←
EJECT LEVER ASSY	460	LY42517-001A	←	←	←	←
SLIT WASHER	461	LY42754-003A	←	←	←	←
LED GUIDE	462	YQ31833-1-1	←	←	←	←
SCREW	463	LY42722-001A	←	←	←	←
DRUM SPACER	464	LY42729-001A	←	←	←	←
SCREW,X2	465	LY42722-001A	←	←	←	←
ROTARY ENCODER	466	QSW0888-001	←	QSW0888-002	←	←
SCREW,X4	467	LY42722-002A	←	←	←	←
LINK LEVER	468	LY31814-001A	←	←	←	←
DRUM FINAL ASSY	469	**	**	**	**	**
CATCHER	469A	YDM1003-1-5	←	←	←	←
SCREW,X2	469B	QYSPSPU1735M	←	←	←	←
SCREW,X2	470	LY42722-001A	←	←	←	←
SCREW,X2	471	SPSH1740Z	←	←	←	←
BRUSH	472	LY43542-001A	←	←	←	←
SCREW	473	LY42722-003A	←	←	←	←
CASSETTE HOUSING FINAL ASSY	*155/481	LY31808-001C	LY31808-002C	LY31808-001C	LY31808-001D	LY31808-002C
SCREW,X4	*156/482	LY42722-003A	←	←	←	←
BRACKET(MECHA)	*161/484	LY32326-001A	←	←	←	←
SCREW,X2	*162/485	LY42722-003A	←	←	←	←
SIDE BRACKET L	*164/487	LY31807-001A	←	←	←	←
SCREW	*165/488	LY42722-003A	←	←	←	←

NOTE:

MARK ← is same as left.
MARK - is not used.
MARK * are shown in the parts list of FINAL ASSY of service manual of each model.
MARK ** shows different parts number, depending on models.

3.3 VHS MECHANISM ASSEMBLY



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	COSMO-HV56	BB

NOTE: The section marked in **AA** and **BB** indicate lubrication and greasing areas.

Fig.3-3-1

3.3.1 VHS MECHANISM ASSEMBLY PARTS LIST

- Since parts numbers described here are the numbers at the time of manualissue, they are subject to change without notice. Therefore, be sure to see a parts list in the service manual of each model as for parts numbers.

System		VHS		S-VHS	
**Job No.		V15D Series	V16D Series	V15S Series	V16S Series
Part Name	Symbol No.	Part No.	Part No.	Part No.	Part No.
MAIN DECK ASSY	1	LP21039-001N	LP21039-001S	LP21039-001R	LP21039-001S
GUIDE POLE CAP	3	LP40097-002D	←	←	←
FULL ERASE HEAD	4	QAH0082-001	←	←	←
LOAD.GEAR BASE	15	LP30958-001B	←	←	←
SCREW,X2	16	QYTPST2620Z	←	←	←
LORD.GEAR(SUPPLY) ASSY	18	LP40798-001A	←	←	←
LORD.GEAR(SUPPLY)	18A	LP21040-001A	←	←	←
LORD.ARM(SUPPLY) ASSY	18B	LP40799-001A	←	←	←
TORSION SPRING(SUPPLY)	19	LP40837-001A	←	←	←
FIXING PLATE	20	LP40903-001A	←	←	←
POLE BASE ASSY(SUPPLY)	21	LP40806-001D	←	←	←
LOAD GEAR	22	LP30959-002A	←	←	←
LORD. GEAR(TAKE UP) ASSY	23	LP40802-001B	LP40802-001C	LP40802-001B	LP40802-001C
LORD. GEAR(TAKE UP)	23A	LP21041-001B	LP21041-001C	LP21041-001B	LP21041-001C
LORD.ARM(TAKE UP) ASSY	23B	LP40803-001A	←	←	←
TORSION SPRING(TAKE UP)	24	LP40838-001A	←	←	←
POLE BASE ASSY(TAKE UP)	26	LP40808-001F	LP40808-001E	←	←
ARM BASE	30	-	←	LP31020-004A	←
SCREW	31	-	←	QYTDST2606Z	-
TU LEVER	36	LP21055-001E	←	←	←
TENSION SPRING	37	LP40943-001A	←	←	←
T-UP HEAD	38	LP40859-001D	←	←	←
LID GUIDE	39	LP30961-001C	←	←	←
SPACER	40	LP30002-0B7A	←	←	-
PINCH ROLLER ARM ASSY	42	LP40810-001A	←	←	←
TORSION SPRING	44	LP40840-001C	LP40840-001D	←	←
PRESS LEVER	46	LP30963-001B	←	←	←
SLIT WASHER	47	PQM30017-24	←	←	←
S-SWITCH	48	-	←	LP40930-002E	←
GIDE ARM ASSY	49	LP40813-001D	←	←	←
TORSION SPRING	50	LP40841-001A	←	←	←
SPACER	51	LP30002-090A	←	←	-
A/C HEAD	52	QAH0081-001	←	←	←
HEAD BASE	53	LP30965-001A	←	←	←
COMPRESSION SPRING	55	LP40842-001A	LP40842-001D	LP40842-001A	LP40842-001D
SCREWX1 A/C HEAD	*56	QYTDST2006M	←	←	←
A/C HEAD SCREW,X2	*57	LP41036-001A	←	←	←
SCREW,X2 A/C HEAD	*58	QYTDST2606Z	←	←	←
LOADING MOTOR	59	QAR0023-001	←	←	←
SCREW,X2	60	QYTPSP3003Z	←	←	←
MOTOR BRACKET	61	LP21056-002F	LP21056-002G	←	←
TAP SCREW	62	QYTPST2620Z	←	←	←
WORM BEARING	63	LP40814-001B	←	←	←
CONTROL CAM	64	LP21044-001D	←	←	←
SLIT WASHER	65	PQM30017-24	←	←	←
WORM GEAR	66	LP40815-001A	←	←	←
HELICAL GEAR	67	LP40816-001B	←	←	←
CONNECT GEAR	68	LP40817-001A	←	←	←

System		VHS		S-VHS	
**Job No.		V15D Series	V16D Series	V15S Series	V16S Series
Part Name	Symbol No.	Part No.	Part No.	Part No.	Part No.
CONTROL PLATE	69	LP10400-001H	←	←	LP10400-001J
TORTION SPRING	70	LP40843-001A	←	←	←
TENSION ARM ASSY	71	LP40818-001B	←	←	←
TENSION SPRING	72	LP40844-001C	LP40844-001E	LP40844-001D	LP40844-001E
TENSION ARM BASE	73	LP21045-001D	←	←	←
TENSION BAND ASSY	74	LP40821-001A	←	←	←
BAND HOLDER-1	75	LP30967-001B	←	←	←
BAND HOLDER-2	76	LP30968-001C	←	←	←
ADJUST PIN	77	LP40822-002B	←	←	←
TENSION ARM LEVER	78	LP31000-005E	←	←	←
MAIN BRAKE(TAKE UP)	79	LP21046-001C	←	←	←
BAND BRAKE ASSY	80	LP40824-001A	←	←	←
BRAKE LEVER	81	LP30969-002A	LP30969-002B	LP30969-002A	LP30969-002B
TENSION SPRING	82	LP30003-033B	←	←	←
TENSION SPRING	83	LP30003-035B	←	←	←
CAPSTAN BRAKE ASSY	84	LP40825-001B	←	←	←
CAPSTAN MOTOR	85	QAR0204-002	←	←	←
SCREW,X3 CAPSTAN MOTOR	86	QYTPSG2606M	QYTPSG2606Z	QYTPSG2606M	QYTPSG2606Z
BELTCAPSTAN MOTOR	87	LP30005-010A	←	←	←
IDLER ARM	88	LP30970-001A	←	←	←
IDLER GEAR 1,X2	89	LP40828-004A	←	←	←
IDLER GEAR 2,X2	90	LP40829-001B	LP40829-002A	LP40829-001B	LP40829-002A
WIRE HOLDER	91	LP31014-001A	←	←	←
CLUTCH UNIT	93	LP40934-001B	←	←	←
SLIT WASHER	94	PQM30017-47	←	←	←
DIRECT GEAR	95	LP30973-001A	←	←	←
COMPRESS. SPRING	96	LP40939-001A	←	←	←
CHANGE LEVER	102	LP30974-001B	←	←	←
REEL DISK,X2	105	LP21049-001A	←	←	←
SPACER,X2	107	LP30017-004A	←	←	←
SIDE FRAME(L)	110	LP10401-001F	LP10401-001H	LP10401-001F	LP10401-001H
SIDE FRAME(R)	111	LP10402-001F	LP10402-001K	LP10402-001G	LP10402-001K
SCREW,X2	112	QYTDST2606Z	←	←	←
TORSION SPRING	113	LP40917-001C	LP40917-001D	←	←
SIDE PLATE	114	LP30976-001D	LP30976-001E	←	←
LIMIT PLATE	115	LP30977-002D	←	←	←
LIMIT SPRING	116	LP40846-001C	←	←	←
DRIVE LEVER	117	LP31100-001B	←	←	←
DRIVE ARM(L)	118	LP30978-001B	←	←	←
DRIVE ARM(R)	119	LP30979-001H	LP30979-001N	LP30979-001H	LP30979-001N
TORSION SPRING	120	LP40847-001B	←	←	←
CONNECT PLATE	121	LP30980-001A	LP30980-001E	LP30980-001B	LP30980-001E
SIDE HOLDER(L)	122	LP10403-001C	←	←	←
SIDE HOLDER(R)	123	LP10404-001D	LP10404-001E	←	←
LOCK LEVER(L)	124	LP30983-001A	LP30983-001B	LP30983-001A	LP30983-001B
LOCK LEVER(R)	125	LP30984-001A	LP30984-001B	LP30984-001A	LP30984-001B
TENSION SPRING,X2	126	LP40924-001C	LP40924-001D	←	←
EARTH SPRING(1)	127	LP40856-001A	←	LP40856-001B	LP40972-001A
EARTH SPRING(2)	128	LP40857-001B	←	←	←
C.HOLDER ASSY	130	LP30981-001E	LP30981-001G	LP30981-001F	LP30981-001G
C.H STOPPER	131	LP31135-001A	-	LP31135-001A	-

System		VHS		S-VHS	
**Job No.		V15D Series	V16D Series	V15S Series	V16S Series
Part Name	Symbol No.	Part No.	Part No.	Part No.	Part No.
R.SAFETY LEVER	134	LP21051-002C	←	←	←
TOP FRAME	137	LP21052-001F	LP21052-001J	LP21052-001H	LP21052-001J
SPACER	138	LP30002-0A7A	-	LP30002-0A7A	-
DOOR OPENER	151	LP30985-001G	←	←	←
TAPE GUIDE	161	-	LP40993-001A	-	LP40993-001A
E-CARD WIRE DRUM.M	WR1	WJT0059-001C	WJT0059-001E	WJT0059-001D	WJT0059-001E
E-CARD WIRE AC HEAD CN2001	WR2	WJT0067-001B	←	←	←
E-FL/RB WIRE LOADING MOTOR	WR3	WJS0022-001A	←	←	←
MEMO	-	PMD0035B-C	PMD0040A-C	PMD0036B-C /PMD0039A-C	PMD0037A-C /PMD0041A-C

NOTE:

MARK ← is same as left.
MARK - is not used.
MARK * shows that Symbol No. and Parts No. may sometimes be different from those in each manual. See the table below for final Symbol No. and Parts No.
MARK ** is Job No.
To identify a model, see the Job No. of the model.
Job No. is shown just above the service manual number at the lower right of the service manual of each model.